NWT Species 2000

General Status Ranks of Wild Species in the Northwest Territories

Northwest Territories Resources, Wildlife and Economic Development

In collaboration with:

Canada

Gwich'in Renewable Resource Board

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As Northerners, we recognize the need to share information. To manage human activities in an ecologically sustainable manner we need tools to exchange ideas, reach common understandings, and build on our collective knowledge. This report describes such a tool. It presents a system for evaluating the status of all wild species in the Northwest Territories (NWT). This system is shared by all other jurisdictions in Canada, and is similar to systems used by other countries. This system will assist us in setting conservation priorities territorially, nationally, and internationally — especially across the circumpolar regions of the world.

This report summarizes the initial findings of an ongoing process — monitoring the general status of wild species in the Northwest Territories. This is the first of a series of reports to be published every five years. Monitoring will be done yearly, by updating, correcting and adding to a searchable catalogue of referenced information called "The NWT Species Monitoring Infobase". Subsequent editions of this report, published every five years, will be based on information added to the monitoring infobase.

In this report, we present lists of wild species prioritized according to their general status. These lists are designed to:

- Provide a priority list of species that need more detailed assessment and may need species protection efforts in the near future;
- Raise awareness of the current status of individual species that were found to be sensitive to human activities, and those for which more information is needed;
- Stimulate public input into a common knowledge base to help in the next general status evaluation; and
- Provide a reference tool to be used by wildlife management agencies, co-management boards, impact assessment agencies, industry, governments, and all northerners when making decisions related to wildlife.

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Please refer to the Monito-RING sheet at the end of this report for more contact numbers.

Acknowledgments

This document is the result of the cooperative effort of many agencies and species experts. Their contributions are an essential part of the monitoring process initiated here. The Wildlife and Fisheries Division of the Department of Resources, Wildlife, and Economic Development (RWED), as lead agency, would like to acknowledge the efforts of all agencies and individuals that contributed to this first edition of the **General Status of Wild Species in the Northwest Territories**.

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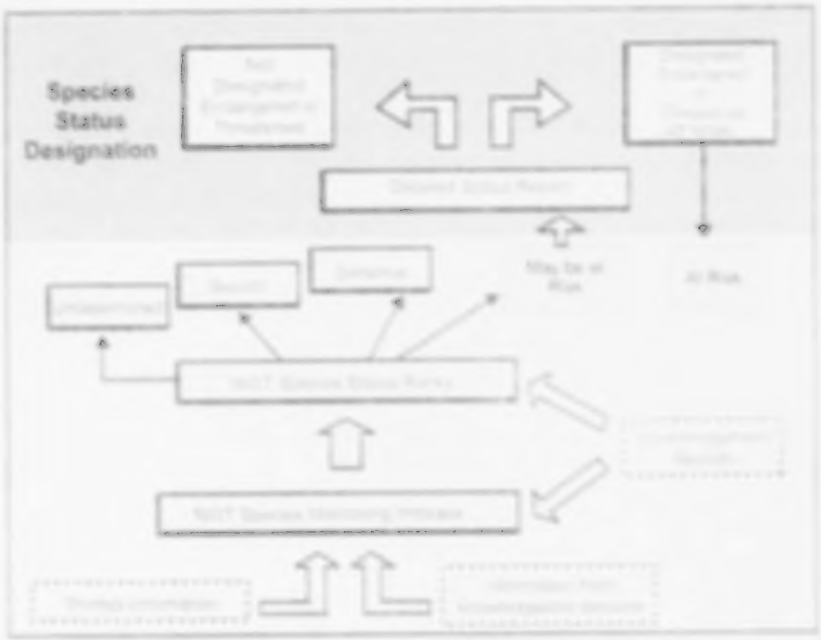
1 Background – Why rank the general status of all wild species?

An understanding of wildlife distribution and population trends is required by northerners involved in traditional activities. Throughout their history, indigenous people have collected and applied information on an ecosystem basis to be able to use wildlife in a sustainable manner, conserving species for future generations. General knowledge about wild species being actively harvested is supplemented by information about their food sources, their habitat, and the forces that can lead to their disappearance from an area. Ranking the general status of all wild species follows similar principles. The knowledge accumulated over generations can be reported for each species and may be shared, in a respectful and appropriate fashion, by all northerners.

In the past, conventional wildlife management focused on collecting information about population numbers and trends for game species. During the past few decades, we have recognized the need for a broader range of information to successfully conserve species. We need to look at a greater array of species and take into account their role in the ecosystem. The loss of a single species from an area may have negative consequences that ripple through an ecosystem, resulting in threats to the survival of both game and non-game species. Increasing our knowledge of all species is thus essential to modern wildlife management and ecologically sustainable development.

Primary Goal

The *maintenance of biodiversity* by ensuring that no species becomes extinct as a consequence of human activity

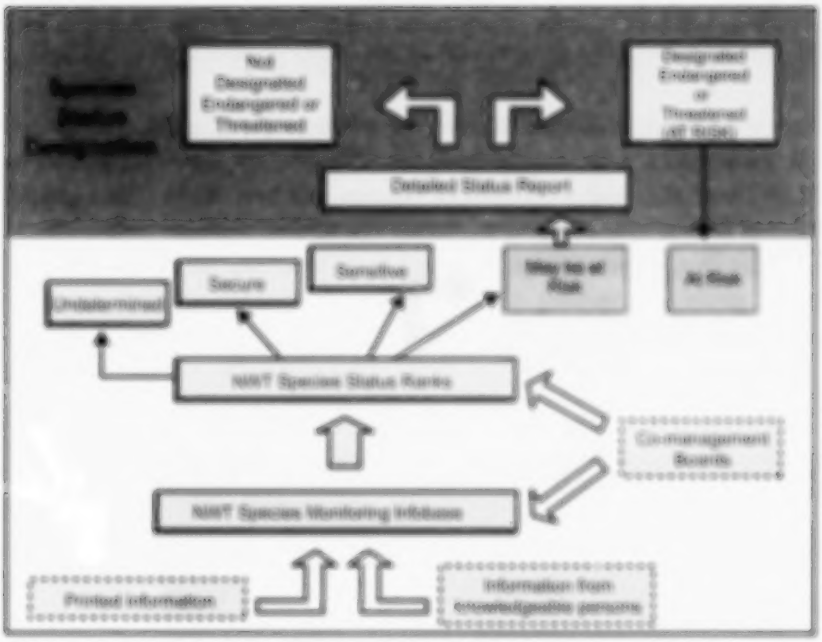


Prioritize

- To prioritize species for more detailed status assessment within the Northwest Territories (NWT).
- To suggest candidate species for detailed assessment by the Committee on the Status of Endangered Wildlife In Canada (COSEWIC) (See Section 7 Linkages).

Primary Goal

The maintenance of biodiversity by ensuring that no species becomes extinct as a consequence of human activity



This report presents the general status ranks of NWT Species. The species ranked as May Be At Risk will have the highest priority for a future detailed assessment of their biological status. The detailed assessment, which may lead to a Species At Risk designation, is not part of this report.

Describe

To succinctly describe the current state of our knowledge about all wild species in the NWT.

Educate

To educate and increase awareness of species needing special attention and of possibilities for active involvement in monitoring activities throughout the NWT.

Guide

To provide a clear evaluation system and species status ranks to guide conservation and impact assessment decisions. To provide a tool for exchanging information about the status of wild species.

Geographic Scope - Where and what is the Northwest Territories?

For the purposes of this project, we considered all land and waters included within the territorial boundary within Canada as part of the Northwest Territories (NWT).

NWT land and waters include the ocean waters and sea floors that are part of the Beaufort Sea- Arctic Ocean complex, limited in the south by the mainland of the Northwest Territories and the offshore limit of the Yukon Territory, in the west by the International Boundary with the United States, in the east by the boundary with Nunavut and in the north by the 90th Parallel.

The Northwest Territories is strikingly rich in ecological transitions and contrasts. From south to north, the boreal forest leads us to the taiga with its patches of permafrost, and then to the tundra, where permafrost is continuous. From east to west, the massive archean rocks of the Canadian Shield give way to horizontal sedimentary rocks under the northern extension of the great interior plains of North America, and then to mountains of sedimentary, igneous and glacial origin. Along the Mackenzie River, one sees the turbid waters from its western mountain-born tributaries flow alongside the clear waters from its eastern Shield-born tributaries. Deltas are transitional zones between water and land. The Mackenzie River has one of the most distinctive deltas in the world, where channels continually change courses and where salt and fresh waters mix. The winter-bound Beaufort Sea and Arctic Ocean harbor polynas, that are free of ice year-round and rich in wildlife.

Travelling back in time, one finds that almost all of the Northwest Territories was deeply buried under ice four times between 600,000 and 13,000 years ago. Between these glaciations, parts of the Northwest

NWT Geographical Information

Land mass:
Area = 1,171,918 km² - 12% of Canada
Bigger than Ontario - Smaller than Alaska

Mackenzie River
Length = 4250 km
Second longest river in North Central America
Drainage basin covers 1,765,000 km²

Great Slave Lake
Area = 28,440 km² - About 5 times Prince Edward Islands.

Great Bear Lake
Area = 31,790 km²
About the same size as Belgium or Vancouver Islands.

Territories were ice-free. Animals used the ice-free corridor to move, mostly from Beringia (Alaska and the Bering Sea today) into the southern regions of North America. Some of these new arrivals are now extinct: wooly mammoths, single-toed horses, and their predators, sabre-toothed tigers and scimitar cats. The surviving species of mammals moved north as the ice sheets retreated; these mammal species are related to those that migrated from Asia through the Beringa region between glaciations. Some descendants of these species are well known today: caribou, moose, lynx, grizzly bears, and wolverines[17].

The last corridor opened about 13,000 - 10,000 years ago, between the eastern Laurentide and the western Cordilleran ice sheets[5]. During that time, a giant water body, Lake McConnell, covered part of the Northwest Territories. This lake is still present today in the form of two large lakes, Great Bear Lake and Great Slave Lake, and large expenses of meadows and muskeg[4,17].

The NWT is an area of transition between typical southern and northern species, and typical western and eastern species. For example, we can find species at their eastern limit of distribution in the Mackenzie Mountains, like the collared pika. We may see species that are not usual neighbours, like moose and muskox in the Thelon Game Sanctuary. Three species of bears, the black bear, the grizzly, and the polar bear are found in the NWT. Bird enthusiasts know that all four species of North American loons —Pacific Loon, Red-throated Loon, Common Loon, and Yellow-billed Loon, may be observed here. Most of the fish species found in the Mackenzie River today came from the unglaciated southern part of North America[3]. So many species are at the limit of their range in the Northwest Territories that we made a special note of them in this report (see footnotes in Results).

These transitions determine to some extent the number and type of species that inhabit the NWT today[17].

Taxonomic Authority - What is a species?

Why use species? The species is often called the "fundamental unit of biological classification"[1]. Biologists define species as "population(s) whose members are able to interbreed freely under natural conditions"[2]. The species is also called a "pragmatic unit of conservation"[3]. Each species can be recognized using morphological and behavioural characteristics.

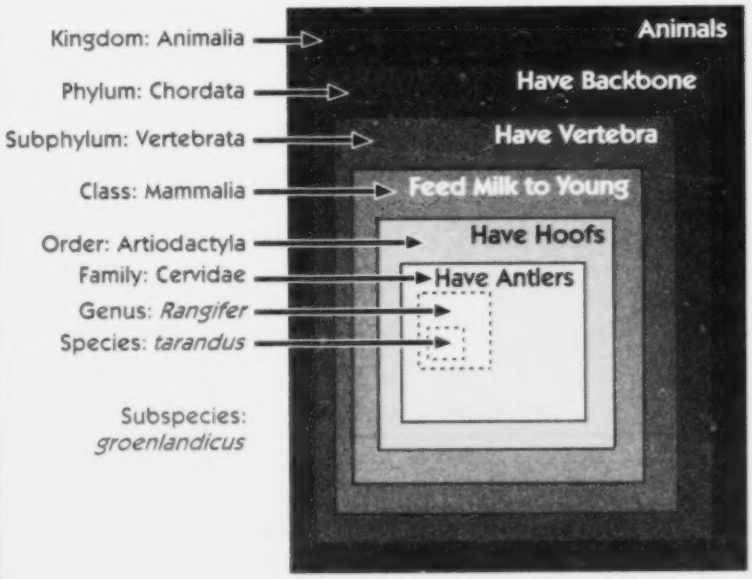
Conserving species is an essential part of conserving biodiversity, as species are the basic building blocks of ecosystems. Species are fundamentally different from each other. We can reconstruct ecosystems by re-establishing species in a region, but we cannot re-create species that are gone. "Once a species is extinct, it is gone forever"[4].

Subspecies are separate populations of a species that inhabit different regions or habitats but that may interbreed. In practice, subspecies are usually populations from different regions that show recognizable morphological differences. It is sometimes preferable to work on the management and conservation of populations of a species, or on a subspecies, as they may possess important adaptations that may be lost if the subspecies disappears. This promotes the conservation of genetic biodiversity[5].

During this project, we were primarily concerned with ranking the status of species, not subspecies or populations. Exceptions to this guideline occurred. For example, the four subspecies of caribou, barrenland, woodland, arctic-island, and peary caribou, were ranked separately. Each of these subspecies occupies a different habitat and they almost never interbreed.

What's in a name?

Taxonomists classify organisms in a system of multi-sized boxes. Bigger boxes are used to group species that look alike and are believed to share a common ancestry. Smaller boxes are used for subspecies. For example, the barrenground caribou is classified as follows:



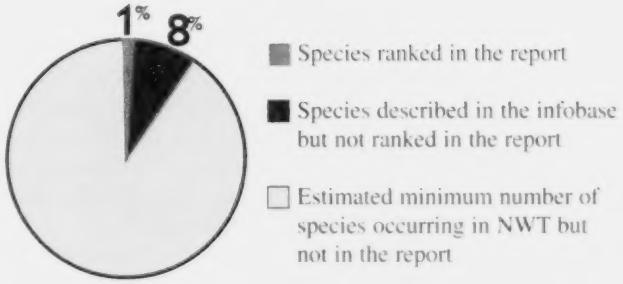
Each species has a two-part Latin name, written in italics. The first part refers to the genus. It is always capitalized. The second part identifies the species itself. Both parts form the scientific name of a species: *Rangifer tarandus*. Unlike common names, scientific names do not differ among regions of the world. For example, caribou are called reindeer in Europe, but they are still *Rangifer tarandus*. No two species share the same scientific Latin name.

Taxonomic Scope - Which species are ranked in this report?

The species listed in this report are but a very small portion (about 1%) of all species known or expected to occur in NWT.

The minimum number of species in the NWT can be calculated to be at least 30,000. Insects are expected to form about half of this biodiversity[5]. However, insects are poorly studied and were not included in this first report.

Plants form about 20% of our biodiversity. We have ranked only two groups: the orchids and the ferns. At least 1200 terrestrial vascular plants are known to grow in the Northwest Territories. These will be ranked in future reports. The most studied groups of species are mammals and birds. These have all been ranked in the following pages.


1%
8%
Species ranked in the report
Species described in the infobase but not ranked in the report
Estimated minimum number of species occurring in NWT but not in the report

Proportion of species ranked in this report compared to all species expected to be in NWT.

Kingdom or major subdivision	Total Expected	Species list available	Status ranked in report	Percent ranked
Superkingdom Prokaryota				
Monera (e.g. bacteria, blue-green algae)	hundreds	0	0	0
Superkingdom Eukaryota				
Algae (e.g. green algae, brown algae, red algae)	thousands	0	0	0
Fungi (e.g. mushrooms, lichens, moulds)	thousands	339	0	0
Protozoa - Single celled organisms	thousands	0	0	0
Animalia - "Simple" invertebrates (jellyfishes, corals, sponges, worms)	thousands	0	0	0
Animalia - Mollusca - Mollusks	thousands	153	2	0
Animalia - Arthropods (e.g. crustaceans, spiders, insects)	11,000 - 22,000[1]	89	0	0
Animalia - Echinoderms (e.g. starfishes, urchins)	hundreds	0	0	0
Animalia - Chordates - Nonvertebrates	hundreds	0	0	0
Animalia - Chordates - Vertebrates - Birds	247	247	247	100
Animalia - Chordates - Vertebrates - Mammals	73	73	73	100
Animalia - Chordates - Vertebrates - Reptiles & Amphibians	8	8	8	100
Animalia - Chordates - Vertebrates - Fishes	80+[2]	48	46	60
Plantae - Bryophytes (liverworts, mosses)	443+	443	0	0
Plantae - Vascular plants (e.g. flowering plants, trees, ferns)	1222+	1222+	40	3
Total	**30,000+**	**2612**	**407**	**1.4**[4]

Total number of expected species were estimated as number of known species in the world x 2.5%, (expected proportion to occur in NWT.)

[1] Expected number of arthropods in NWT was estimated using two methods. (1) NWT species numbers = C x p, where C is the number of known Canadian arthropod species [5] (37,000) and p is the expected proportion of C found in the NWT, based on the proportion of Canadian butterfly species known to be in NWT = 30%. (2) NWT species numbers = W x q, where W is the number of known arthropod species in the world [5] (874 000) and q is the expected proportion of W found in NWT, based on the average proportion of known species in the world found in NWT (2.5%).

[2] Freshwater fish species = 48; Marine fish species is estimated at about 55 species

[3] Moss species, not including liverworts.

[4] Percent of all taxa for which we have any estimate of how many are expected in NWT (about 30, 000 minimum). Actual percent ranked is lower.

4 Data Sources & Methods - What did we do?

Species Lists and Information - Building a useful infobase

To meet the different objectives of this project, a reference information system called an infobase was created to store all the information necessary to rank species. Each species listed in the infobase has an alphanumeric code (e.g., Dall's sheep is AMALE04020) unique to that species and used by other organizations around the world to exchange information on that species[7]. These codes simplify the exchange of information between the NWT infobase and other similar systems in North America and around the world.

Marten *P. Nicklen*

Each line of information in the infobase was referenced to the original source. Sources of information could be a printed publication, a database or a knowledgeable person. See examples of the content of the infobase in **Section 5, Status Ranks**.

Printed material - The Baseline Information

Reference books, published literature and databases of recorded observations were used to create a list of species present in the NWT. Printed references also provided baseline information used to assess status rank of species and useful background information on the biology of the species, its habitat, its taxonomy, and its status according to COSEWIC.

Local Knowledge, Traditional Ecological Knowledge and Scientific Knowledge - Adding Information

Knowledgeable people added information from additional printed material, from their own observations, and from their expert opinion. This scientific and traditional knowledge contributed greatly to the knowledge needed to rank species. During the next few years, knowledgeable individuals will be asked to improve the infobase by adding more information and data.

To obtain a copy of the infobase **NWT Species Monitoring** please contact

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Use of Traditional Knowledge in Wildlife Management - A Case Study

The Gwich'in Renewable Resource Board (GRRB) was established as the main instrument of renewable resource (wildlife, fisheries, forestry) management in the Gwich'in Settlement Area under the Gwich'in Comprehensive Land Claim Agreement. The GRRB consists of a Chairperson who is Gwich'in, 6 board members and 6 alternates, one-half of who are Gwich'in beneficiaries. The staff of the GRRB is composed of a nearly equal mix of non-Gwich'in and Gwich'in beneficiaries. The Gwich'in board members and staff bring their own experiences and perspectives to the table.

The GRRB operates under a co-management framework that assures that each Gwich'in community, represented by a Renewable Resource Council, is included in and must approve any proposal for wildlife research and management projects within their area of concern.

There are several ways in which Traditional Knowledge (TK) is used by the GRRB. TK and local knowledge collected in workshops and by private interviews is a necessary first step in designing any project. As the settlement area is large and remote, local knowledge is key to effectively selecting study areas, understanding seasonal range use of the species, and animal - hunter dynamics.

The Gwich'in Harvest Study has been collecting harvest information from Gwich'in hunters, trappers and fishers for 5 years. This information is the main source of mortality data for population modeling, and for understanding the distribution of mortality on the landscape.

Several GRRB staff are dedicated to the Gwich'in Environmental Knowledge Project and have established a TK database. They have produced one book (Gwich'in Elders. 1997. ***Gwich'in Words about the Land****. Gwich'in Renewable Resource Board. Inuvik, NT. 212pp) and are working on a second book documenting Gwich'in Traditional Knowledge about the land, wildlife and fish.*

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Evaluation process - From Information System to General Status Ranks

Guidelines were developed to convert data and information into seven indicators. These indicators were then scored to produce a status rank for each species. The process by which this was done differed slightly amongst groups of species. For mammals and fishes, a committee reviewed the information, scored the indicators and drafted a status. If the committee considered that insufficient information was available to reliably evaluate the health of a species, a status of "Undetermined" was given to that species. For birds, amphibians, and reptiles, information used in the scoring process was limited to printed material with the help of one or two experts.

For plants, non-experts evaluated status ranks using printed information only. In this case, further guidelines were used to help non-experts with their evaluation. Again, if the printed material available did not contain enough information to draft a status, a status of "Undetermined" was given to that species.

The guidelines were followed generally, but were not used as a strict rule. If committees, experts and knowledgeable people were of the opinion that some indicators did not fully reflect a useful aspect of a species' health, the indicator was given less weight in drafting a status. In each case, justifications and comments were provided with the status.

Indicators and Scores - Tools to rank the general status of a species

To evaluate the biological status of a species, seven standard biological indicators were examined.

Size	**1A** Population Size = the current estimate of the total number of mature individuals. **1B** Number of Occurrences = the estimated number of occurrences where the species currently persists. An occurrence is a location or place where a species is found, in which a single event may affect all individuals of the population. **1C** Distribution = the current range. In this report, distribution was calculated as the percentage of total NWT land or marine area covered by the range of the species.
Trend	**2A** Trend in Population = an estimate of the change in number of mature individuals over time. **2B** Trend in Distribution = an estimate of the change in area of range over time.
Threat	**3A** Threats to Population = observed, inferred, or projected factors affecting individuals or populations that may result in population declines. **3B** Threats to Habitat = observed, inferred, or projected habitat alterations that may result in population declines.

Each indicator was given a score according to the matrix, shown below. The scores were then converted into a general status by following guidelines demonstrated in the scoring matrix. As a guide, the species is assigned the highest general status reached using any indicator.

Guidelines for Scoring Indicators and Assigning General Status Ranks

	Indicator	Score A	Score B	Score C	Score D
Size	1A. Population Size	Very Small (<1000)	Small (1000-3000)	Medium (3000-10 000)	Large (> 10 000)
	1B. Number of Occurences	Very Small (0-5)	Small (6-20)	Medium (21-100)	Large (> 100)
	1C. Distrbution	Very Restricted (< 3% of jurisdiction)	Restricted (4-10% of jursidiction)	Regional (10-50% of jursidiction)	Widespread (> 50% of jurisdiction)
Trend	2A. Trend in Population	Rapid Decline (> 50% in 10 years)	Decline (20% in ten years)	Stable (incl. natural fluctuations)	Increasing (at any rate)
	2B. Trend in Distribution	Rapid Decline	Decline	Stable	Increasing
Threat	3A. Threats to Population	Extreme	Moderate	Limited	None
	3B. Threats to Distrbution	Extreme	Moderate	Limited	None

Guide: Assign the highest general status reached using any indicator.

May be at Risk Sensitive Secure

Status Categories - Priorities for study and management

Each species was placed into one of nine standard categories.

1) **At Risk** = species for which a detailed assessment has already been completed (e.g., by COSEWIC or jurisdictional status reports) that determined the species to be at risk of extirpation or extinction (e.g., Endangered or Threatened by COSEWIC).

2) **May Be At Risk** = species that may be at risk of extinction or extirpation, and are therefore candidates for detailed risk assessment.
These species are ranked with the highest priority for a more detailed assessment by COSEWIC or a jurisdiction.

3) **Sensitive** = species that are not at risk of extinction or extirpation but may require special attention or protection to prevent them from becoming at risk.
These species are ranked with a medium priority for further consideration.

4) **Secure** = species which are not at risk or sensitive.
These species have the lowest priority for further consideration.

5) **Undetermined** = species for which insufficient information, knowledge, or data is available to reliably evaluate their general status.

6) **Not Assessed** = species which have not been examined for this report.
Due to time constraints, many species have not been assessed for the 2000 report. This information provides a list of species that should be examined for the 2005 report.

7) **Exotic/Alien** = species that have been introduced as a result of human activities.
Changes in their status can be monitored as their presence and abundance may affect the status of wild species native to NWT.

8) **Extirpated/ Extinct** = species no longer thought to be present in the NWT (extirpated) or are believed no longer present anywhere in the world (extinct).

9) **Vagrant/Accidental** = species occurring infrequently and unpredictably in NWT, i.e., outside their usual range.
These species may be in the NWT due to unusual weather occurrences, an accident during migration, or unusual breeding behavior by a small number of individuals. If a species appears in the NWT with increasing predictability and more frequently, it may eventually be given a different rank. Changes in Vagrant species may be a good indicator of general ecosystem or climatic changes.

For each group of species — mammals, marine mammals, birds, freshwater fishes, reptiles and amphibians, and orchids and ferns — we have asked experts to describe what characterizes the group they study, to explain why they are monitored, and to summarize current monitoring and research activities.

For each group of species, we also present an example of the information and scores obtained to rank each species. Each example is an excerpt from the NWT SPECIES MONITORING infobase.

The assessment process results in lists of species with status ranks. These are summarized in the tables below. All species marked by an "L" are present in the NWT at the limit or edge of their natural range. The procedure used to assess and rank species is noted in the "Decision Process" column. Each table (except for Vascular Plants) also provides the COSEWIC status for all species that have already been assessed in a detailed manner by COSEWIC.

Terrestrial Mammals

Mam. ma. li. a - A class of vertebrate animals of more than 15,000 species, including humans, distinguished by self-regulating body temperature, hair, and, in the females, mammae (Webster's II New Riverside University Dictionary).

Mammals have roamed the earth for at least the last 300 million years. During that time they have produced a dizzying array of species, including both the largest animal that has ever lived, the blue whale, and the tiny, short-lived Arctic shrew. Mammals occur on and around every continent and region of the planet and owe their spectacular success to many features - they are warm-blooded and can remain active under a wide array of environmental conditions, they have highly specialized senses of sight, hearing, and smell, they are efficient at gathering and using a tremendous variety of foods, and in some species, extended periods of parental care have allowed parents to train offspring in demanding foraging patterns, annual migration cycles, and complex social behaviours.

In the Northwest Territories, a wide variety of wild mammal species have been important for people as sources of food; for making clothing, tents, boats, and tools; and as a source of income through the sale of furs, hides, and meat. Many of the territory's most abundant and treasured animal species are mammals: including moose, barren-ground and woodland caribou, beluga whale, marten, fox, wolf, lynx, ringed seal, muskox, grizzly bear, otter, snowshoe and arctic hare. Some of our mammalian species, such as the polar bear, occur only in the far north well above treeline while others like the Dall's sheep, pika, and mountain goat are only found in the rugged Mackenzie and Richardson Mountains, and others, such as the fisher, white-tailed deer, and bison are at the northern limit of their range in North America within the NWT and rarely venture north of the 62nd line of latitude. Some other species, such as the wolf, are highly adaptable to local environmental conditions and are found across most of the territory.

Because of their continued importance, biologists spend more time studying mammals in the NWT than any other group of animals. Considerable effort has been spent on documenting the range, habitat requirements, seasonal migration patterns, and numbers of mammals such as barren-ground caribou, muskox, moose, polar bears, grizzly bears, wolves, and Dall's sheep. These projects often take many years to complete and sometimes involve detailed study of individual animals within a herd or population through the use of special collars that transmit radio signals that can be received from an aircraft or even by a passing satellite. The health status, including the accumulation of contaminants from the environment, of both marine and terrestrial mammals is of particular importance because so many different mammals are eaten for food.

Some mammals, such as lemmings, snowshoe hares, and voles, are preyed upon by larger carnivores and undergo regular and dramatic population fluctuations known as cycles. During these cycles, which may last 4 to 10 years, population numbers may change over 100-fold so that it can be rare to see a hare track one winter, yet the whole forest can be covered by tracks only a few years later. The changes in these population cycles are regularly monitored by biologists, who also provide the information to trappers. Trappers can then predict whether the predators, such as marten and lynx, that depend on these populations of small mammals, will be scarce or abundant.

Alasdair Veitch
Supervisor, Wildlife Management
Sahtu Region
Resources, Wildlife and Economic Development, GNWT

Mountain Goat **Order** Artiodactyla
Oreamnos americanus **Family** Bovidae

General Biology: Number of known subspecies in Canada: *1 (B001)*; Female age at maturity: *2.5 years (B112)*;
Longevity: *up to 12 years (B001)*; Frequency of reproduction per year: *1 (B001)*
Habitat in NWT: Breeding ecozones: *Taiga Cordillera (B112)*;
Summer Habitat: *at or above timberline in subalpine and arctic alpine rugged, moutainous terrain (B112)*
Economic notes: *tourism; trophy hunting (5 - 10 annually by NWT residents) (H111; B112)*

Abundance and size	**Scores**
1A. Population size in NWT	**A**
more than 400 (B112) less than 1000 (H111) (B112; H111)	
1B. Number of occurences in NWT	**A**
1 population (H116)	
1C. Summer distribution (% of NWT)	**A**
1% (B112)	
Trends	
2A. Trend in population	
stable; unknown in NWT (B112;H111)	
2B. Trend in distribution	**C**
Range in North America increasing (B112)	
Threats	
3A. Threats to population	**B**
Lack of suitable forage in winter, snow slides (B112), possible re-activation of mine, helicopter disturbance (H116) (B112, H116)	
3B. Threats to habitat	**C**
Possible re-activation of mine. (H116)	

NWT Status Rank May Be At Risk
Oreamnos americanus

Comments and Notes if any: High rank due to very small population size, number of occurences and small distribution; trend in population unknown. Species at limit of range in NWT.
Decision process: Drafted By Mammal Committee
COSEWIC designated Status: blank

Alphanumeric notes are reference codes available with the infobase:
B001 Banfield, A.W.F. 1974. The Mammals of Canada. University of Toronto Press.
B112 Chapman, J.A. & Feldhamer, G.A. (eds). 1982. Wild Mammals of North America: Biology, Management, Economics. The Johns Hopkins University Press
H111 Veitch, A. 1999. Personal Communication. Supervisor, Wildlife Management, RWED, Norman Wells
H116 Mammals Committee. 1999. Personal Communication. RWED, GNWT

Terrestrial Mammals

There are 63 known species of land mammals in the Northwest Territories. Two species of mammals may be at risk and are on the priority list for a more detailed assessment of their biological status: the Mountain Goat and the Fisher. Species are listed according to the scientific Order they belong to (Latin name), then by their status rank, and finally by their Latin species name.

Common Name	Scientific Name	Status Rank	Range Note	Decision Process	COSEWIC Status
Ungulates - Artiodactyla					
Arctic-Island Caribou	*Rangifer tarandus groenlandicus x pearyi (R. t. pearyi x groenlandicus)*			a	Banks Island - Endangered - 1991 Low Arctic - Threatened - 1991
Peary Caribou	*Rangifer tarandus pearyi*			a	High Arctic - Endangered - 1991
Wood Bison	*Bos bison athabascae*			a	Threatened - 2000
Mountain Goat	*Oreamnos americanus*		L	a	
Woodland Caribou	*Rangifer tarandus caribou*	Sensitive		a	Boreal population = Threatened - 2000 Northern Mountain pop = Not At Risk - 2000
Moose	*Alces alces*	Secure		a	
Muskox	*Ovibos moschatus*	Secure		a	
Dall's Sheep	*Ovis dalli dallii*	Secure		a	
Barrenland Caribou	*Rangifer tarandus groenlandicus*	Secure		a	
Mule Deer	*Odocoileus hemionus*	Undetermined	L	c	
White-tailed Deer	*Odocoileus virginianus*	Undetermined	L	b	
Carnivores - Carnivora					
Fisher	*Martes pennanti*			a	
River Otter	*Lutra canadensis*	Sensitive		a	
Grizzly Bear	*Ursus arctos*	Sensitive		a	Special Concern - 1991
Polar Bear	*Ursus maritimus*	Sensitive		a	Special Concern - 1999
Arctic Fox	*Alopex lagopus*	Secure		a	
Gray Wolf	*Canis lupus*	Secure		a	*Canis lupus arctos* = Data Deficient - 1999 *Canis lupus occidentalis* = Not at Risk - 1999
Wolverine	*Gulo gulo*	Secure		a	Western population = Special Concern -2000
Lynx	*Lynx canadensis*	Secure		a	Not at Risk - 1989
Marten	*Martes americana*	Secure		a	
Striped Skunk	*Mephitis mephitis*	Secure	L	b	
Ermine (Stoat)	*Mustela erminea*	Secure		a	
Least Weasel	*Mustela nivalis*	Secure		c	
Mink	*Mustela vison*	Secure		a	
Black Bear	*Ursus americanus*	Secure		a	Not at Risk - 1999
Red Fox	*Vulpes vulpes*	Secure		a	
Coyote	*Canis latrans*	Undetermined	L	b	
Cougar	*Felis concolor*	Undetermined	L	b	

Common Name	Scientific Name	Status Rank	Range Note	Decision Process	COSEWIC Status
Bats - Chiroptera					
Little Brown Bat	*Myotis lucifugus*	Sensitive	L	b	
Hoary Bat	*Lasiurus cinereus*	Undetermined		b	
Northern Myotis	*Myotis septentrionalis*	Undetermined	L	b	
Insectivores - Insectivora					
Arctic Shrew	*Sorex arcticus*	Secure		b	
Masked Shrew	*Sorex cinereus*	Secure		b	
Pygmy Shrew	*Sorex hoyi*	Secure		b	
Dusky Shrew	*Sorex monticolus*	Secure		b	
Water Shrew	*Sorex palustris*	Secure		b	
Tundra Shrew	*Sorex tundrensis*	Undetermined		c	
Barrenground Shrew	*Sorex ugyunak*	Undetermined		c	
Hare-like mammals - Lagomorpha					
Collared Pika	*Ochotona collaris*	Sensitive	L	c	
Snowshoe Hare	*Lepus americanus*	Secure		c	
Arctic Hare	*Lepus arcticus*	Secure		c	
Rodents - Rodentia					
Northern Flying Squirrel	*Glaucomys sabrinus*	Sensitive		b	
Beaver	*Castor canadensis*	Secure		a	
Southern Red-backed Vole	*Clethrionomys gapperi*	Secure		b	
Northern Red-backed Vole	*Clethrionomys rutilus*	Secure		b	
Victoria Collared Lemming	*Dicrostonyx kilangmiutak*	Secure		c	
Common Porcupine	*Erethizon dorsatum*	Secure	L	c	
Least Chipmunk	*Eutamias (Tamias) minimus*	Secure		b	
Brown Lemming	*Lemmus sibiricus*	Secure		c	
Woodchuck	*Marmota monax*	Secure		b	
Tundra Vole	*Microtus oeconomus*	Secure		c	
Meadow Vole	*Microtus pennsylvanicus*	Secure		b	
Chestnut-cheeked (Taiga) Vole	*Microtus xanthognathus*	Secure		b	
Muskrat	*Ondatra zibethicus*	Secure		a	
Deer Mouse	*Peromyscus maniculatus*	Secure		b	
(Eastern) Heather Vole	*Phenacomys intermedius (ungava)*	Secure		b	
Arctic Ground Squirrel	*Spermophilus parryii*	Secure		c	
Northern Bog Lemming	*Synaptomys borealis*	Secure		b	
Red Squirrel	*Tamiasciurus hudsonicus*	Secure		b	
Peary Land Collared Lemming	*Dicrostonyx groenlandicus*	Undetermined	L	c	
Richardson's Lemming	*Dicrostonyx richardsoni*	Undetermined	L	c	
Hoary Marmot	*Marmota caligata*	Undetermined	L	c	
Long-tailed Vole	*Microtus longicaudus*	Undetermined	L	c	
Singing Vole	*Microtus miurus*	Undetermined		c	
Bushy-tailed Wood Rat	*Neotoma cinerea*	Undetermined	L	c	
Meadow Jumping Mouse	*Zapus hudsonius*	Undetermined		b	

1 General Status Ranks are given for 4 subspecies separately. The species caribou (*Rangifer tarandus*) was recorded as "Secure".
2 General Status Rank is given for Wood Bison only. The subspecies Plains Bison (*B. b. bison*), including suspected hybrids of Plains-Wood Bison (*B. b. bison x athabascae*) are "Not Assessed".
3 Species includes two subspecies: Arctic Gray Wolf (*C. l. arctos*) and Boreal Gray Wolf (*C. l. occidentalis*).
4 Population in the Boreal Plains and Taiga Plains ecozones only.
5 Status provisional until reviewed by COSEWIC's Aboriginal Traditional Knowledge Group.
L = Species at the limit or edge of range in NWT. Small distribution (less than 10% of NWT), hence small numbers are expected.
X = Usual range of species not in NWT.
a Decision drafted by Committee.
b Decision based on printed information and comments from one to three experts.
c Decision based on printed information only.

Common Name	Scientific Name	Status Rank	Range Note	Decision Process	COSEWIC Status
Bats - Chiroptera					
Little Brown Bat	*Myotis lucifugus*	Sensitive	L	b	
Hoary Bat	*Lasiurus cinereus*	Undetermined		b	
Northern Myotis	*Myotis septentrionalis*	Undetermined	L	b	
Insectivores - Insectivora					
Arctic Shrew	*Sorex arcticus*	Secure		b	
Masked Shrew	*Sorex cinereus*	Secure		b	
Pygmy Shrew	*Sorex hoyi*	Secure		b	
Dusky Shrew	*Sorex monticolus*	Secure		b	
Water Shrew	*Sorex palustris*	Secure		b	
Tundra Shrew	*Sorex tundrensis*	Undetermined		c	
Barren-ground Shrew	*Sorex ugyunak*	Undetermined		c	
Hare-like mammals - Lagomorpha					
Collared Pika	*Ochotona collaris*	Sensitive	L	c	
Snowshoe Hare	*Lepus americanus*	Secure		c	
Arctic Hare	*Lepus arcticus*	Secure		c	
Rodents - Rodentia					
Northern Flying Squirrel	*Glaucomys sabrinus*	Sensitive		b	
Beaver	*Castor canadensis*	Secure		a	
Southern Red-backed Vole	*Clethrionomys gapperi*	Secure		b	
Northern Red-backed Vole	*Clethrionomys rutilus*	Secure		b	
Victoria's Collared Lemming	*Dicrostonyx hilangmaiensis*	Secure		c	
Common Porcupine	*Erethizon dorsatum*	Secure	L	c	
Least Chipmunk	*Eutamias (Eutamias) minimus*	Secure		b	
Brown Lemming	*Lemmus sibiricus*	Secure		c	
Woodchuck	*Marmota monax*	Secure		b	
Tundra Vole	*Microtus oeconomus*	Secure		c	
Meadow Vole	*Microtus pennsylvanicus*	Secure		b	
Chestnut-cheeked (Taiga) Vole	*Microtus xanthognathus*	Secure		b	
Muskrat	*Ondatra zibethicus*	Secure		a	
Deer Mouse	*Peromyscus maniculatus*	Secure		b	
(Eastern) Heather Vole	*Phenacomys intermedius* (subspecies)	Secure		b	
Arctic Ground Squirrel	*Spermophilus parryii*	Secure		c	
Northern Bog Lemming	*Synaptomys borealis*	Secure		b	
Red Squirrel	*Tamiasciurus hudsonicus*	Secure		b	
Peary Land Collared Lemming	*Dicrostonyx groenlandicus peary*	Undetermined	L	c	
Richardson's Lemming	*Dicrostonyx richardsoni*	Undetermined	L	c	
Hoary Marmot	*Marmota caligata*	Undetermined	L	c	
Long-tailed Vole	*Microtus longicaudus*	Undetermined	L	c	
Singing Vole	*Microtus miurus*	Undetermined		c	
Hardy-tailed Wood Rat	*Neotoma cinerea*	Undetermined	L	c	
Meadow Jumping Mouse	*Zapus hudsonius*	Undetermined		b	

1 Current status Ranks are given for a subspecies separately. The species-level Ranking assumes a non-protected status.
2 Subspecies Rank is given for Boreal Plains only. The subspecies Plains Bison (*B. b. bison*) including imported Wood x Plains Boreal Bison (*B. b. bison x athabascae*) are Not Assessed.
3 Species includes two subspecies, Arctic Gray Wolf (*C. l. arctos*) and Boreal Gray Wolf (*C. l. occidentalis*).
4 Population in the Boreal Plains and Taiga Plains ecozones only.
5 Status previously undetermined in COSEWIC's Aboriginal Traditional Knowledge Group.
L = Species at the limit or edge of range in NWT. Small distribution (less than 10% of NWT), or/and very small numbers are expected.
X = Great range or species not in NWT.
a Decision drafted by Committee.
b Decision based on printed information and comments from one or three experts.
c Decision based on limited information only.

Marine Mammals

Marine mammals are anatomically and physiologically adapted for life in water. Their bodies are streamlined for swimming and they are able to dive for long periods of time in search of food. Like other mammals, marine mammals breathe air and must surface from time to time to renew their oxygen supply. They also bear live young and nurse them with milk. Two groups of marine mammals, cetaceans and pinnipeds occur in arctic waters. Cetaceans include baleen whales (Suborder Mysticeti) and toothed whales (Suborder Odontoceti). Both types of whales occur in NWT waters. The bowhead whale (Balaena mysticetus) is a baleen whale in the family Balaenidae whereas the beluga or white whale (Delphinapterus leucas) is a toothed whale in the family Monodontidae. Pinnipeds include fur seals (Otariidae), walrus (Odobenidae) and hair seals (Phocidae). Only phocids occur with regularity in the NWT.

Belugas RWED Collection

Marine mammals in arctic waters are hunted for food and are an important source of protein for northern residents. Research and stock assessment programs are routinely conducted to monitor numbers and distribution to ensure that harvest levels are sustainable. In recent years, marine mammals have become a focus of ecotourism thus the monitoring of numbers and status is necessary to minimize possible effects of disturbance. Similarly, industrial activity such a shipping, mining and oil exploration can affect arctic marine mammal distribution and numbers through disturbance or direct mortality. Thus potential effects of any industrial development on marine mammals are assessed and monitored.

Marine mammals are sensitive to overexploitation. The severe reduction in numbers of bowhead whales that resulted from commercial whaling and the resulting long wait for species recovery have been strong lessons in the value of good management of marine mammals. If a marine mammal species is allowed to decline, recovery, if it occurs, takes many years. Marine mammals are also good indicators of marine environmental quality. Species such as beluga whales and ringed seals feed near the top of the food chain. Profiles and levels of contaminants found in these species have been useful sources of information on pollution in arctic waters. The close link between the people and marine mammals in the arctic further emphasizes the need to monitor the status of marine mammals in the Canadian arctic.

Dr. Sue Cosens
DFO Science Directorate,
Freshwater Institute
Winnipeg, MB

Bowhead Whale **Order** Cetacea
Balaena mysticetus **Family** Balaenidae

General Biology: Number of known subspecies in Canada: 1 subspecies but 3 stocks (SCU2); Female age at maturity: 13.5 metres or age approx. 20 years (R024); Longevity: possibly up to 200 years (R024); Frequency of reproduction per year: ? (R024)
Habitat in NWT: Breeding ecozones: Eastern Arctic Ocean, Western Arctic Ocean (BSC1); Habitat: southern edge of pack ice, especially in highly productive waters (R026)
Economic notes: hunted nearly to extinction; hunting haulted since 1937 (B001)

	Scores
Abundance and size	
1A. Population size in NWT	C
~8000 in NWT (R026; SUC7;SUC2;SUC15)	
1B. Number of occurences in NWT	B
3 stocks, several summering areas; bowheads aggregate so poor criterion (H135)	
1C. Marine distribution (% of NWT)	D
65% (P025;SUC2:BSC1)	
Trend	
2A. Trend in population	D
increasing; about 1% per year (R024;SUC15)	
2B. Trend in distribution	C
migratory (B001;BSC1)	
Threats	
3A. Threats to population	B
potential overhunting, environmental conditions; oil development (R024;H135)	
3B. Threats to habitat	B
oil development (R024;H135)	
NWT Status Rank	**Sensitive**
Balaena mysticetus	

Tail of Bowhead Whale J. Stevenson

Comments and Notes if any: Population may never have been more than 10000 animals, so this number is not necessarily problematic.
Decision process: Drafted by Arctic Stock Assessment DFO Committee - Freshwater Fishes
COSEWIC designated Status: Endangered - 1986 R024

Alphanumeric notes in parentheses are reference codes available with the infobase.

B001 Banfield, A.W.F.1974. The Mammals of Canada. University of Toronto Press
BSC1 Forsyth, A. 1999. Mammals of North America – Temperate and Arctic Regions. Firefly Books
H135 Cosens, S. 2000. Personnal communication. Arctic Stock Assessment Section, DFO Science Directorate
P025 Department of Resources, Wildlife and Economic Development, GNWT.1993 . NWT wildlife sketches: Whales of the Northwest Territories. Department of Resources, Wildlife and Economic Development, GNWT.
R024 Mitchell, E. & Reeves, R.R.1986. Updated status report on the bowhead whale (Beaufort Sea/Arctic Ocean population) Balaena mysticetus in Canada. COSEWIC.
R026 Department of Fisheries and Oceans. 1980. Status report on the bowhead whale *Balaena mysticetus* in Canada. COSEWIC.
SCU2 Burns, J.J., Montague, J.J. & Cowles, C.J.(eds.). 1993. The Bowhead Whale Special Publication No. 2. 787 pages. The Society of Marine Mammalogy.
SUC7 DFO. 1999. Hudson Bay/Foxe Basin Bowhead Whales. DFO Science Stock Status Report E5-52 (1999).
SUC15 Zeh, J.E.1995.Population size and rate of increase, 1978-1993, of bowhead whales, *Balaena mysticetus*. Report of the International Whaling Commission 45: 339-344.

Marine Mammals

Ten species of marine mammals can be found in NWT marine waters — the Beaufort Sea and Arctic Ocean. Of these, three are vagrant and seen only rarely. The Beaufort Sea population of bowhead whale was assessed as Endangered by COSEWIC in 1986. Based on the results of the ranking exercise reported here, an updated detailed assessment of this species status may be required, as the status of this population appears to be improving. Species are listed according to the scientific Order they belong to (Latin name), then by their status rank, and finally by their Latin species name.

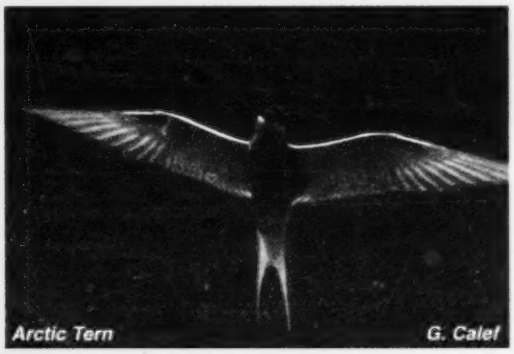
Common Name	Scientific Name	Status Rank	Range Note	Decision Process	COSEWIC Status
Whales - Cetacea					
Bowhead Whale[1]	*Balaena mysticetus*	Sensitive		a	Western Arctic = Endangered - 1986
White (Beluga) Whale[2]	*Delphinapterus leucas*	Secure		a	Beaufort & West Hudson Bay & Canadian High Arctic[2] = Not at Risk - 1985
Killer Whale	*Orcinus orca*	Undetermined	L	a	Data deficient - 1999
Gray Whale	*Eschrichtius robustus*	Vagrant	X	b	
Narwhal	*Monodon monoceros*	Vagrant	X	a	Not at Risk - 1987
Seals & Walrus - Pinnipedia					
Bearded Seal	*Erignathus barbatus*	Secure		a	Not at Risk - 1994
Ringed Seal	*Phoca hispida*	Secure		a	
Northern Fur Seal	*Callorhinus ursinus*	Vagrant	X	a	
Walrus	*Odobenus rosmarus*	Vagrant	X	a	
Harbour Seal	*Phoca vitulina*	Not assessed	X	b	Northern pop = Data deficient - 1999

1 General Status Rank is given for the only population present in NWT: Western Arctic population.
2 General Status Rank is given for the only population present in NWT: Beaufort Sea population. COSEWIC grouped together and assessed all populations from the Beaufort Sea, West Hudson Bay and Canadian High Arctic.
L = Species at the limit or edge of range in NWT. Small distribution (less than 10% of NWT), hence small numbers are expected.
X = Usual range of species not in NWT.
a Decision drafted by Committee.
b Decision based on printed information and comments from one to three experts.
c Decision based on printed information only.

Birds

Birds are a conspicuous and well-loved part of northern ecosystems.

In the north, the presence of birds is for the most part a seasonal phenomenon; over 90% of the NWT's bird species are migratory. We share our birds with southern Canada, the United States, and Central and South American countries. We act as the "production line" for numerous bird species. Several shorebirds, geese and seaducks breed only in arctic and sub-arctic regions and most nest in NWT and Nunavut. The abundant lakes, ponds, and wetlands in the forested portion of the NWT provide continentally important breeding habitat for a number of duck species and for other aquatic birds such as loons and grebes. The NWT also contains the northern limits of breeding range for numerous species of song birds and colonial waterbirds.



Arctic Tern G. Calef

Birds are valuable components of the landscape and are deserving of conservation efforts. Values that we associate with birds include:

- *Subsistence and sport hunting. Subsistence use of birds is particularly high in the NWT and on the central and south American wintering grounds of some of our species.*
- *Humans derive pleasure from birds, through observing birds, feeding birds in winter, and providing shelter for nesting birds.*
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Northern birds are also impacted by changes in the global environment. Global climate change is already being felt in Canada. It is predicted that the Mackenzie River Valley will experience significant warming over the next 50 years, changing permafrost structure, precipitation cycles, and hence the character of tundra and forest habitats in the NWT. It is not clear just how this will affect populations of breeding birds.

Bird populations in the NWT are monitored to varying degrees. Monitoring for some species is minimal. Current bird monitoring efforts in the NWT include:

- *NWT/Nunavut Bird Checklist Survey program*
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- *Annual counts - e.g., Whooping Cranes in Wood Buffalo National Park, and White Pelicans in Fort Smith*
- *Counts at five-year intervals, e.g., Peregrine Falcon and Trumpeter Swan surveys.*

International, national, and territorial bird conservation and monitoring efforts are being developed that should increase the level and scope of bird studies in the Northwest Territories.

Vicky Johnston
Canadian Wildlife Service
Environment Canada
Yellowknife, NT

Marine Mammals

Ten species of marine mammals can be found in NWT marine waters — the Beaufort Sea and Arctic Ocean. Of these, three are vagrant and seen only rarely. The Beaufort Sea population of bowhead whale was assessed as Endangered by COSEWIC in 1986. Based on the results of the ranking exercise reported here, an updated detailed assessment of this species status may be required, as the status of this population appears to be improving. Species are listed according to the scientific Order they belong to (Latin name), then by their status rank, and finally by their Latin species name.

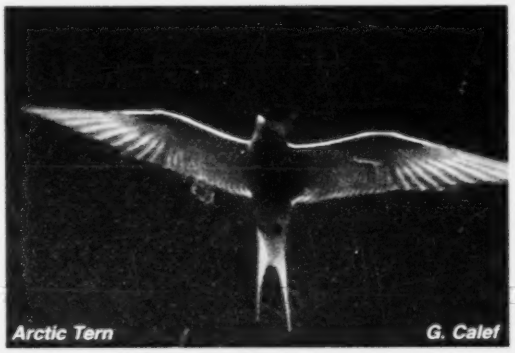
Common Name	Scientific Name	Status Rank	Range Note	Decision Process	COSEWIC Status
Whales - Cetacea					
Bowhead Whale[1]	*Balaena mysticetus*	Sensitive		a	Western Arctic = Endangered - 1986
White (Beluga) Whale[2]	*Delphinapterus leucas*	Secure		a	Beaufort & West Hudson Bay & Canadian High Arctic[2] = Not at Risk - 1985
Killer Whale	*Orcinus orca*	Undetermined	L	a	Data deficient - 1999
Gray Whale	*Eschrichtius robustus*	Vagrant	X	b	
Narwhal	*Monodon monoceros*	Vagrant	X	a	Not at Risk - 1987
Seals & Walrus - Pinnipedia					
Bearded Seal	*Erignathus barbatus*	Secure		a	Not at Risk - 1994
Ringed Seal	*Phoca hispida*	Secure		a	
Northern Fur Seal	*Callorhinus ursinus*	Vagrant	X	a	
Walrus	*Odobenus rosmarus*	Vagrant	X	a	
Harbour Seal	*Phoca vitulina*	Not assessed	X	b	Northern pop = Data deficient - 1999

1 General Status Rank is given for the only population present in NWT: Western Arctic population.
2 General Status Rank is given for the only population present in NWT: Beaufort Sea population. COSEWIC grouped together and assessed all populations from the Beaufort Sea, West Hudson Bay and Canadian High Arctic.
L = Species at the limit or edge of range in NWT. Small distribution (less than 10% of NWT), hence small numbers are expected.
X = Usual range of species not in NWT.
a Decision drafted by Committee.
b Decision based on printed information and comments from one to three experts.
c Decision based on printed information only.

Birds

Birds are a conspicuous and well-loved part of northern ecosystems.

In the north, the presence of birds is for the most part a seasonal phenomenon; over 90% of the NWT's bird species are migratory. We share our birds with southern Canada, the United States, and Central and South American countries. We act as the "production line" for numerous bird species. Several shorebirds, geese and seaducks breed only in arctic and sub-arctic regions and most nest in NWT and Nunavut. The abundant lakes, ponds, and wetlands in the forested portion of the NWT provide continentally important breeding habitat for a number of duck species and for other aquatic birds such as loons and grebes. The NWT also contains the northern limits of breeding range for numerous species of song birds and colonial waterbirds.



Arctic Tern G. Calef

Birds are valuable components of the landscape and are deserving of conservation efforts. Values that we associate with birds include:

- *Subsistence and sport hunting. Subsistence use of birds is particularly high in the NWT and on the central and south American wintering grounds of some of our species.*
- *Humans derive pleasure from birds, through observing birds, feeding birds in winter, and providing shelter for nesting birds.*
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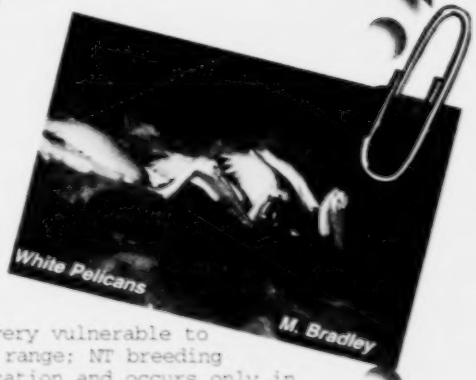
Vicky Johnston
Canadian Wildlife Service
Environment Canada
Yellowknife, NT

American White Pelican **Order** Pelecaniformes
Pelecanus erythrorhynchos **Family** Pelecanidae

General Biology: Number of known subspecies in Canada:1 (B004); Female age at maturity: blank; Longevity: blank; Frequency of reproduction per year: blank.
Habitat in NWT: Breeding ecozones: Taiga Shield, Boreal Plains (B004); **Summer Habitat:** islands in interior lakes (B004); Winter location: southern US to central America (B004)
Economic notes: predaceous on fish (B004)

Abundance and size	Scores
1A. Population size in NWT: about 500; systematic surveys conducted in Fort Smith, none elsewhere(MAF4; H108)	**A**
1B. Number of occurences in NWT very small; only one known breeding site at present - non-breeding birds consistently occur at several other locations (H108; MAF4)	**A**
1C. Summer distribution (% of NWT) 1% (B004; MAF4)	**A**
Trend	
2A. Trend in population increasing overall from historic declines - increasing in NT as well (H108; MAF4; MAF5; H122)	**C/D**
2B. Trend in distribution possibly increasing;recent observations suggest this species may be increasing in numbers in NT and new breeding sites may eventually be colonized (H108; MAF4; MAF5)	**D**
Threats	
3A. Threats to population small and newly established or re-colonizing populations very vulnerable to disturbance - NT population at extreme northern limits of range; NT breeding population is in early stages of colonization / re-colonization and occurs only in areas accessible to humans (H108)	**B**
3B. Threats to habitat human disturbance, disturbance at breeding sites could preclude any attempts to establish new breeding colonies (H108)	**B**


White Pelicans
M. Bradley

NWT Status Rank May Be At Risk
Pelecanus erythrorhynchos

Comments on status if any: Status due to very low numbers and # of occurences, and type of potential threats, at northern limit, common elsewhere
Status determination process: Drafted by M. Fournier, CWS, Yellowknife
COSEWIC Status: Threatened - 1978 ; Not At Risk -1987

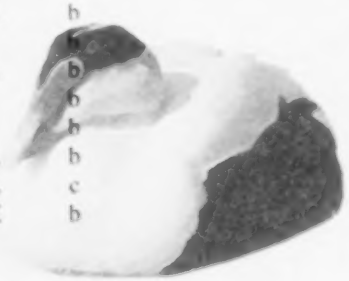
Alphanumeric notes are reference codes available with the infobase.

B004 Godfrey, W. E. 1986. The Birds of Canada. Revised Edition. National Museums of Canada.
H108 Fournier, M.A. 1999. Personal Communication. Environment Canada, Canadian Wildlife Service, Yellowknife.
H122 Bradley, M. 1999. Personnal Communication. Wood Buffalo National Park, Fort Smith, NT.
MAF4 Sirois, J., Fournier, M.A. & Kay, M. 1995. The colonial waterbirds of Great Slave Lake, Northwest Territories: an annotated atlas. Occasional Paper No. 89. Canadian Wildlife Service.
MAF5 Dunn, E. 1996. Trends in "other" waterbirds. Bird Trends, No.5, Fall 1996. Environment Canada/Canadian Wildlife Service, Ottawa

Birds

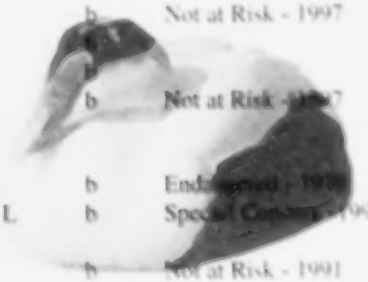
There are 247 known species of birds in the Northwest Territories. Of these, 11 species are not seen regularly and are outside their normal range in NWT. Seven bird species were given a "May Be At Risk" rank, and are of higher priority for a more detailed assessment: the Harlequin Duck, the Ivory Gull, the Ross's Gull, the Peregrine Falcon (subspecies *tundrius*), the Yellow Rail, the Gray-headed Chickadee, and the American White Pelican. Species are listed according to the scientific Order they belong to (Latin name), then by their status rank, and finally by their Latin species name.

Common Name	Scientific Name	Status Rank	Range Note	Decision Process	COSEWIC Status
Duck-like birds - Anseriformes					
Harlequin Duck	*Histrionicus histrionicus*	May be At Risk	L	b	Eastern population = Endangered - 1990
Northern Pintail	*Anas acuta*	Sensitive		b	
Lesser Scaup	*Aythya affinis*	Sensitive		b	
Oldsquaw	*Clangula hyemalis*	Sensitive		b	
Trumpeter Swan	*Cygnus buccinator*	Sensitive		b	Not at Risk - 1996
White-winged Scoter	*Melanitta fusca* -	Sensitive		b	
Black Scoter	*Melanitta nigra*	Sensitive	L	b	
Surf Scoter	*Melanitta perspicillata*	Sensitive		b	
Common Eider	*Somateria mollissima*	Sensitive		b	
King Eider	*Somateria spectabilis*	Sensitive		b	
American Wigeon	*Anas americana*	Secure		b	
Green-winged Teal	*Anas crecca*	Secure		b	
Northern Shoveler	*Anas clypeata*	Secure		b	
Blue-winged Teal	*Anas discors*	Secure		b	
Mallard	*Anas platyrhynchos*	Secure		b	
Greater White-fronted Goose	*Anser albifrons*	Secure		b	
Snow Goose	*Anser caerulescens*	Secure		b	
Ross's Goose	*Anser rossii*	Secure	L	b	
Redhead	*Aytha americana*	Secure	L	b	
Ring-necked Duck	*Aythya collaris*	Secure		b	
Greater Scaup	*Aytha marila*	Secure		b	
Canvasback	*Aythya valisineria*	Secure		b	
Brant	*Branta bernicla*	Secure		b	
Canada Goose	*Branta canadensis*	Secure		b	
Bufflehead	*Bucephala albeola*	Secure		b	
Common Goldeneye	*Bucephala clangula*	Secure		b	
Barrow's Goldeneye	*Bucephala islandica*	Secure	L	b	
Tundra Swan	*Cygnus columbianus*	Secure		b	
Hooded Merganser	*Lophodytes cucullatus*	Secure	L	b	
Common Merganser	*Mergus merganser*	Secure		b	
Red-breasted Merganser	*Mergus serrator*	Secure		b	
Ruddy Duck	*Oxyura jamaicensis*	Secure	L	b	
Gadwall	*Anas strepera*	Undetermined	L	c	
Eurasian Wigeon	*Anas penelope*	Vagrant	X	b	
Nighthawks - Caprimulgiformes					
Common Nighthawk	*Chordeiles minor*	Undetermined	L	b	



Common Name	Scientific Name	Status Rank	Range Note	Decision Process	COSEWIC Status
Marine-dwelling birds & shorebirds - Charadriiformes					
Eskimo Curlew	*Numenius borealis*	At Risk		b	Endangered - 1978
Ivory Gull	*Pagophila eburnea*	May Be At Risk		b	Special Concern - 1996
Ross's Gull	*Rhodostethia rosea*	May Be At Risk	L	b	Special Concern - 1996
Sanderling	*Calidris alba*	Sensitive		b	
Least Sandpiper	*Calidris minutilla*	Sensitive		b	
Semipalmated Sandpiper	*Calidris pusilla*	Sensitive		b	
Black Tern	*Chlidonias niger*	Sensitive		b	Not at Risk - 1996
Common Snipe	*Gallinago gallinago*	Sensitive		b	
Long-billed Dowitcher	*Limnodromus scolopaceus*	Sensitive		b	
Whimbrel	*Numenius phaeopus*	Sensitive		b	
Red Phalarope	*Phalaropus fulicaria*	Sensitive		b	
Red-necked Phalarope	*Phalaropus lobatus*	Sensitive		b	
American Golden Plover	*Pluvialis dominica*	Sensitive		b	
Black-bellied Plover	*Pluvialis squatarola*	Sensitive		b	
Caspian Tern	*Sterna caspia*	Sensitive		b	Not at Risk - 1999
Lesser Yellowlegs	*Tringa flavipes*	Sensitive		b	
Buff-breasted Sandpiper	*Tryngites subruficollis*	Sensitive		b	
Ruddy Turnstone	*Arenaria interpres*	Secure		b	
Dunlin	*Calidris alpina*	Secure		b	
Baird's Sandpiper	*Calidris bairdii*	Secure		b	
Red Knot	*Calidris canutus*	Secure	L	b	
White-rumped Sandpiper	*Calidris fuscicollis*	Secure		b	
Pectoral Sandpiper	*Calidris melanotos*	Secure		b	
Herring Gull	*Larus argentatus*	Secure		b	
California Gull	*Larus californicus*	Secure		b	
Mew Gull	*Larus canus*	Secure		b	
Iceland Gull	*Larus glaucoides*	Secure			
Glaucous Gull	*Larus hyperboreus*	Secure		b	
Bonaparte's Gull	*Larus philadelphia*	Secure		b	
Thayer's Gull	*Larus thayeri*	Secure		c	
Common Tern	*Sterna hirundo*	Secure	L	b	
Arctic Tern	*Sterna paradisaea*	Secure		b	
Sabine's Gull	*Xema sabini*	Secure		b	
Spotted Sandpiper	*Actitis macularia*	Undetermined		b	
Upland Sandpiper	*Bartramia longicauda*	Undetermined		b	
Stilt Sandpiper	*Calidris himantopus*	Undetermined		b	
Black Guillemot	*Cepphus grylle*	Undetermined	L	b	
Semipalmated Plover	*Charadrius semipalmatus*	Undetermined		b	
Killdeer	*Charadrius vociferus*	Undetermined		b	
Wandering Tattler	*Heteroscelus incanus*	Undetermined	L	c	
Hudsonian Godwit	*Limosa haemastica*	Undetermined		b	
Long-tailed [illegible]	*Stercorarius longicaudus*	Undetermined		b	
Parasitic [illegible]	*Stercorarius parasiticus*	Undetermined		b	
Pomarine [illegible]	*Stercorarius pomarinus*	Undetermined		b	
Greater Yellowlegs	[illegible] *melanoleuca*	Undetermined	L	b	
Solitary Sandpiper	[illegible] *solitaria*	Undetermined		b	
Thick-billed Murre (Brénnich's murre)	[illegible]	Undetermined	L	b	
Short-billed Dowitcher	[illegible] *griseus*	Not Assessed		b	
Wilson's Phalarope	*Phalaropus tricolor*	Not Assessed	L	b	
Surfbird	*Aphriza virgata*	Vagrant	X	c	
Purple Sandpiper	*Calidris maritima*	Vagrant	X	b	

Common Name	Scientific Name	Status Rank	Range Note	Decision Process	COSEWIC Status
Western Sandpiper	*Calidris mauri*	Vagrant	X	c	
Heron-like birds - Ciconiiformes					
American Bittern	*Botaurus lentiginosus*	Sensitive	L	b	
Great Egret	*Ardea alba*	Vagrant	X	b	
Great Blue Heron	*Ardea herodias*	Vagrant	X	b	
Cattle Egret	*Bubulcus ibis*	Vagrant	X	b	
Snowy Egret	*Egretta thula*	Vagrant	X	b	
Dove-like birds - Columbiformes					
Rock Dove (Domestic Pigeon)	*Columba livia*	Exotic/Alien		c	
Mourning Dove	*Zenaida macroura*	Vagrant	L	c	
Kingfishers - Coraciiformes					
Belted Kingfisher	*Ceryle alcyon*	Secure		b	
Birds of prey - Falconiformes					
Anatum Peregrine Falcon	*Falco peregrinus anatum*	At Risk		b	Threatened - 1999
Tundra Peregrine Falcon	*Falco peregrinus tundrius*	May Be At Risk		b	Special Concern -1992
Golden Eagle	*Aquila chrysaetos*	Sensitive		b	Not at Risk - 1986
Northern Goshawk	*Accipiter gentilis*	Secure		b	Not at Risk - 1995
Sharp-shinned Hawk	*Accipiter striatus*	Secure		b	Not at Risk - 1997
Red-tailed Hawk	*Buteo jamaicensis*	Secure		b	Not at Risk - 1995
Rough-legged Hawk	*Buteo lagopus*	Secure		b	
Northern Harrier	*Circus cyaneus*	Secure		b	Not at Risk - 1993
Merlin	*Falco columbarius*	Secure		b	Not at Risk - 1985
Gyrfalcon	*Falco rusticolus*	Secure		b	Not at Risk - 1987
American Kestrel	*Falco sparverius*	Secure		b	
Bald Eagle	*Haliaeetus leucocephalus*	Secure		b	Not at Risk - 1984
Osprey	*Pandion haliatus*	Secure		b	
Broad-winged Hawk	*Buteo platypterus*	Undetermined	L	c	
Swainson's Hawk	*Buteo swainsoni*	Undetermined	L	b	
Grouse-like birds - Galliformes					
Rock Ptarmigan	*Lagopus mutus*	Sensitive		b	
Ruffed Grouse	*Bonasa umbellus*	Secure		b	
Spruce Grouse	*Dendragapus canadensis*	Secure		b	
Willow Ptarmigan	*Lagopus lagopus*	Secure		b	
Sharp-tailed Grouse	*Tympanuchus phasianellus*	Secure		b	
Blue Grouse	*Dendragapus obscurus*	Undetermined	L	b	
White-tailed Ptarmigan	*Lagopus leucurus*	Undetermined	L	b	
Loons - Gaviiformes					
Common Loon	*Gavia immer*	Secure		b	Not at Risk - 1997
Pacific Loon	*Gavia pacifica*	Secure		b	
Red-throated Loon	*Gavia stellata*	Secure		b	
Yellow-billed Loon	*Gavia adamsii*	Undetermined		b	Not at Risk - 1997
Crane-like birds - Gruiformes					
Whooping Crane	*Grus americana*	At Risk		b	Endangered - 1978
Yellow Rail	*Coturnicops noveboracensis*	May be At Risk	L	b	Special Concern - 1990
American Coot	*Fulica americana*	Sensitive		b	Not at Risk - 1991



Common Name	Scientific Name	Status Rank	Range Note	Decision Process	COSEWIC Status
Marine-dwelling birds & shorebirds - Charadriiformes					
Eskimo Curlew	*Numenius borealis*				Endangered - 1978
Ivory Gull	*Pagophila eburnea*				Special Concern - 1990
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Sanderling	*Calidris alba*	Sensitive			
Least Sandpiper	*Calidris minutilla*	Sensitive			
Semipalmated Sandpiper	*Calidris pusilla*	Sensitive			
Black Tern	*Chlidonias niger*	Sensitive			Not at Risk - 1996
Common Snipe	*Gallinago gallinago*	Sensitive			
Long-billed Dowitcher	*Limnodromus scolopaceus*	Sensitive			
Whimbrel	*Numenius phaeopus*	Sensitive			
Red Phalarope	*Phalaropus fulicaria*	Sensitive			
Red-necked Phalarope	*Phalaropus lobatus*	Sensitive			
American Golden Plover	*Pluvialis dominica*	Sensitive			
Black-bellied Plover	*Pluvialis squatarola*	Sensitive			
Caspian Tern	*Sterna caspia*	Sensitive			Not at Risk - 1999
Lesser Yellowlegs	*Tringa flavipes*	Sensitive			
Buff-breasted Sandpiper	*Tryngites subruficollis*	Sensitive			
Ruddy Turnstone	*Arenaria interpres*	Secure			
Dunlin	*Calidris alpina*	Secure			
Baird's Sandpiper	*Calidris bairdii*	Secure			
Red Knot	*Calidris canutus*	Secure			
White-rumped Sandpiper	*Calidris fuscicollis*	Secure			
Pectoral Sandpiper	*Calidris melanotos*	Secure			
Herring Gull	*Larus argentatus*	Secure			
California Gull	*Larus californicus*	Secure			
Mew Gull	*Larus canus*	Secure			
Iceland Gull	*Larus glaucoides*	Secure			
Glaucous Gull	*Larus hyperboreus*	Secure			
Bonaparte's Gull	*Larus philadelphia*	Secure			
Thayer's Gull	*Larus thayeri*	Secure			
Common Tern	*Sterna hirundo*	Secure			
Arctic Tern	*Sterna paradisaea*	Secure			
Sabine's Gull	*Xema sabini*	Secure			
Spotted Sandpiper	*Actitis macularia*	Undetermined			
Upland Sandpiper	*Bartramia longicauda*	Undetermined			
Stilt Sandpiper	*Calidris himantopus*	Undetermined			
Black Guillemot	*Cepphus grylle*	Undetermined			
Semipalmated Plover	*Charadrius semipalmatus*	Undetermined			
Killdeer	*Charadrius vociferus*	Undetermined			
Wandering Tattler	*Heteroscelus incanus*	Undetermined			
Hudsonian Godwit	*Limosa haemastica*	Undetermined			
Long-tailed Jaeger	*Stercorarius longicaudus*	Undetermined			
Pomarine Jaeger	*Stercorarius pomarinus*	Undetermined			
Parasitic Jaeger	*Stercorarius parasiticus*	Undetermined			
Greater Yellowlegs	*Tringa melanoleuca*	Undetermined			
Solitary Sandpiper	*Tringa solitaria*	Undetermined			
Black-billed Murre	*Uria lomvia*	Undetermined			
Short-billed Dowitcher	*Limnodromus griseus*	Not Assessed			
Wilson's Phalarope	*Phalaropus tricolor*	Not Assessed			
Redhead	*Aythya americana*	Exotic			
Ruddy Shelduck	*Tadorna ferruginea*	Exotic			

Common Name	Scientific Name	Status Rank	Range Note	Decision Process	COSEWIC Status
Western Sandpiper	*Calidris mauri*	Vagrant	X	-	
Heron-like birds - Ciconiiformes					
American Bittern	*Botaurus lentiginosus*	Sensitive	L	P	
Great Egret	*Ardea alba*	Vagrant	X	P	
Great Blue Heron	*Ardea herodias*	Vagrant	X	P	
Cattle Egret	*Bubulcus ibis*	Vagrant	X	P	
Snowy Egret	*Egretta thula*	Vagrant	X	P	
Dove-like birds - Columbiformes					
Rock Dove (Domestic Pigeon)	*Columba livia*	Exotic Alien		C	
Mourning Dove	*Zenaida macroura*	Vagrant	L	-	
Kingfishers - Coraciiformes					
Belted Kingfisher	*Ceryle alcyon*	Secure		P	
Birds of prey - Falconiformes					
Northern Peregrine Falcon	*Falco peregrinus tundrius*	At Risk		P	Threatened - 1999
Tundra Peregrine Falcon	*Falco peregrinus tundrius*	May Be At Risk		P	Special Concern - 1992
Bald Eagle	*Haliaeetus leucocephalus*	Sensitive		P	Not at Risk - 1990
Northern Goshawk	*Accipiter gentilis*	Secure		P	Not at Risk - 1999
Sharp-shinned Hawk	*Accipiter striatus*	Secure		P	Not at Risk - 1987
Red-tailed Hawk	*Buteo jamaicensis*	Secure		P	Not at Risk - 1999
Rough-legged Hawk	*Buteo lagopus*	Secure		P	
Northern Harrier	*Circus cyaneus*	Secure		P	Not at Risk - 1987
Merlin	*Falco columbarius*	Secure		P	Not at Risk - 1987
Gyrfalcon	*Falco rusticolus*	Secure		P	Not at Risk - 1987
American Kestrel	*Falco sparverius*	Secure		P	
Bald Eagle	*Haliaeetus leucocephalus*	Secure		P	Not at Risk - 1994
Osprey	*Pandion haliaetus*	Secure		P	
Broad-winged Hawk	*Buteo platypterus*	Undetermined	L	-	
Swainson's Hawk	*Buteo swainsoni*	Undetermined	L	-	
Grouse-like birds - Galliformes					
Rock Ptarmigan	*Lagopus muta*	Sensitive		P	
Ruffed Grouse	*Bonasa umbellus*	Secure		P	
Spruce Grouse	*Dendragapus canadensis*	Secure		P	
White-tailed Ptarmigan	*Lagopus leucurus*	Secure		P	
Sharp-tailed Grouse	*Tympanuchus phasianellus*	Secure		P	
Blue Grouse	*Dendragapus obscurus*	Undetermined	L	-	
Willow Ptarmigan	*Lagopus lagopus*	Undetermined	L	-	
Loons - Gaviiformes					
Common Loon	*Gavia immer*	Secure		P	Not at Risk - 1987
Pacific Loon	*Gavia pacifica*	Secure		P	
Red-throated Loon	*Gavia stellata*	Secure		P	
Yellow-billed Loon	*Gavia adamsii*	Sensitive		P	Not at Risk - 1987
Crane-like birds - Gruiiformes					
Whooping Crane	*Grus americana*	At Risk		P	Endangered - 1978
Sandhill Crane	*Grus canadensis*	May Be At Risk	L	P	Special Concern - 1
Virginia Rail	*Rallus limicola*	Secure		P	
Sora	*Porzana carolina*	Secure		P	Not at Risk - 1987

Common Name	Scientific Name	Status Rank	Range Note	Decision Process	COSEWIC Status
Sandhill Crane	*Grus canadensis*	Secure		b	
Sora	*Porzana carolina*	Secure		b	
Perching birds - Passeriformes					
Grey-headed Chickadee (Siberian Tit)	*Poecile cinctus*	May Be At Risk	L	b	
American (formerly Water) Pipit	*Anthus rubescens (formerly A.spinoletta)*	Sensitive		b	
Olive-sided Flycatcher	*Contopus cooperi*	Sensitive		b	
Blackpoll Warbler	*Dendroica striata*	Sensitive		b	
Rusty Blackbird	*Euphagus carolinus*	Sensitive		b	
Barn Swallow	*Hirundo rustica*	Sensitive		b	
Boreal Chickadee	*Poecile (formerly Parus) hudsonicus*	Sensitive		b	
Bank Swallow	*Riparia riparia*	Sensitive		b	
American Tree Sparrow	*Spizella arborea*	Sensitive		b	
White-throated Sparrow	*Zonotrichia albicollis*	Sensitive		b	
Harris's Sparrow	*Zonotrichia querula*	Sensitive		b	
Red-winged Blackbird	*Agelaius phoeniceus*	Secure		b	
Bohemian Waxwing	*Bombycilla garrulus*	Secure		b	
Common Redpoll	*Carduelis flammea*	Secure		b	
Pine Siskin	*Carduelis pinus*	Secure		b	
Hermit Thrush	*Catharus guttatus*	Secure		b	
Grey-cheeked Thrush	*Catharus minimus*	Secure		b	
Swainson's Thrush	*Catharus ustulatus*	Secure		b	
Common Raven	*Corvus corax*	Secure		b	
Yellow-rumped Warbler	*Dendroica coronata/auduboni*	Secure		b	
Magnolia Warbler	*Dendroica magnolia*	Secure		b	
Palm Warbler	*Dendroica palmarum*	Secure		b	
Yellow Warbler	*Dendroica petechia*	Secure		b	
Alder Flycatcher	*Empidonax alnorum*	Secure		b	
Yellow-bellied Flycatcher	*Empidonax flaviventris*	Secure		b	
Least Flycatcher	*Empidonax minimus*	Secure		b	
Horned Lark	*Eremophila alpestris*	Secure		b	
Dark-eyed Junco	*Junco hyemalis*	Secure		b	
Northern Shrike	*Lanius excubitor*	Secure		b	
Red Crossbill	*Loxia curvirostra*	Secure	L	b	
White-winged Crossbill	*Loxia leucoptera*	Secure		b	
Swamp Sparrow	*Melospiza georgiana*	Secure		b	
Lincoln's Sparrow	*Melospiza lincolnii*	Secure		b	
Black-and-white Warbler	*Mniotilta varia*	Secure		b	
Savannah Sparrow	*Passerculus sandwichensis*	Secure		b	
Grey Jay	*Perisoreus canadensis*	Secure		b	
Cliff Swallow	*Petrochelidon (Hirundo) pyrrhonota*	Secure		b	
Black-billed Magpie	*Pica pica*	Secure		b	
Western Tanager	*Piranga ludoviciana*	Secure		b	
Black-capped Chickadee	*Poecile atricapillus*	Secure		b	
Ruby-crowned Kinglet	*Regulus calendula*	Secure		b	
Eastern Phoebe	*Sayornis phoebe*	Secure		b	
Northern Waterthrush	*Seiurus noveboracensis*	Secure		b	
American Redstart	*Setophaga ruticilla*	Secure		b	
Red-breasted Nuthatch	*Sitta canadensis*	Secure	L	b	

Common Name	Scientific Name	Status Rank	Range Note	Decision Process	COSEWIC Status
Chipping Sparrow	*Spizella passerina*	Secure		b	
Tree Swallow	*Tachycineta bicolor*	Secure		b	
American Robin	*Turdus migratorius*	Secure		b	
Eastern Kingbird	*Tyrannus tyrannus*	Secure		b	
Orange-crowned Warbler	*Vermivora celata*	Secure		b	
Tennessee Warbler	*Vermivora peregrina*	Secure		b	
Warbling Vireo	*Vireo gilvus*	Secure		b	
Red-eyed Vireo	*Vireo olivaceus*	Secure		b	
Wilson's Warbler	*Wilsonia pusilla*	Secure		b	
White-crowned Sparrow	*Zonotrichia leucophrys*	Secure		b	
Le Conte's Sparrow	*Ammodramus leconteii*	Undetermined	L	b	
Nelson's Sharp-tailed Sparrow	*Ammodramus nelsoni (caudacutus)*	Undetermined	L	b	
Cedar Waxwing	*Bombycilla cedrorum*	Undetermined	L	b	
Lapland Longspur	*Calcarius lapponicus*	Undetermined		b	
Smith's Longspur	*Calcarius pictus*	Undetermined		b	
Hoary Redpoll	*Carduelis hornemanni*	Undetermined		b	
Purple Finch	*Carpodacus purpureus*	Undetermined	L	b	
American Dipper	*Cinclus mexicanus*	Undetermined	L	b	
Evening Grosbeak	*Coccothraustes vespertinus*	Undetermined	L	b	
Western Wood-Pewee	*Contopus sordidulus*	Undetermined		b	
American Crow	*Corvus brachyrhynchos*	Undetermined	L	b	
Bay-breasted Warbler	*Dendroica castanea*	Undetermined	L	b	
Cape May Warbler	*Dendroica tigrina*	Undetermined	L	b	
Townsend's Warbler	*Dendroica townsendi*	Undetermined	L	c	
Hammond's Flycatcher	*Empidonax hammondii*	Undetermined	L	b	
Dusky Flycatcher	*Empidonax oberholseri*	Undetermined	L	b	
Brewer's Blackbird	*Euphagus cyanocephalus*	Undetermined	L	b	
Common Yellowthroat	*Geothlypis trichas*	Undetermined	L	b	
Varied Thrush	*Ixoreus naevius*	Undetermined		b	
Gray-crowned Rosy Finch	*Leucosticte tephrocotis (L. arctoa)*	Undetermined	L	b	
Song Sparrow	*Melospiza melodia*	Undetermined		b	
Brown-headed Cowbird	*Molothrus ater*	Undetermined	L	b	
Townsend's Solitaire	*Myadestes townsendi*	Undetermined	L	b	
Northern Wheatear	*Oenanthe oenanthe*	Undetermined		b	
Connecticut Warbler	*Oporornis agilis*	Undetermined	L	c	
Mourning Warbler	*Oporornis philadelphia*	Undetermined	L	b	
Fox Sparrow	*Passerella iliaca*	Undetermined		b	
Pine Grosbeak	*Pinicola enucleator*	Undetermined		b	
Rose-breasted Grosbeak	*Pheucticus ludovicianus*	Undetermined	L	b	
Snow Bunting	*Plectrophenax nivalis*	Undetermined		b	
Vesper Sparrow	*Pooecetes gramineus*	Undetermined	L	b	
Common Grackle (Bronzed Grackle)	*Quiscalus quiscula*	Undetermined	L	b	
Golden-crowned Kinglet	*Regulus satrapa*	Undetermined	L	b	
Say's Phoebe	*Sayornis saya*	Undetermined		b	
Ovenbird	*Seiurus aurocapillus*	Undetermined	L	b	
Mountain Bluebird	*Sialia currucoides*	Undetermined	L	b	
Clay-colored Sparrow	*Spizella pallida*	Undetermined	L	b	
Violet-green Swallow	*Tachycineta thalassina*	Undetermined	L	b	
Winter Wren	*Troglodytes troglodytes*	Undetermined	L	b	

Common Name	Scientific Name	Status Rank	Range Note	Decision Process	COSEWIC Status
Sandhill Crane					
Scoter					

Perching birds - Passeriformes

Common Name	Scientific Name	Status Rank	Range Note	Decision Process	COSEWIC Status
Chipping Sparrow	*Spizella passerina*	Secure		b	
Tree Swallow	*Tachycineta bicolor*	Secure		b	
American Robin	*Turdus migratorius*	Secure		b	
Eastern Kingbird	*Tyrannus tyrannus*	Secure		b	
Orange-crowned Warbler	*Vermivora celata*	Secure		b	
Tennessee Warbler	*Vermivora peregrina*	Secure		b	
Warbling Vireo	*Vireo gilvus*	Secure		b	
Red-eyed Vireo	*Vireo olivaceus*	Secure		b	
Wilson's Warbler	*Wilsonia pusilla*	Secure		b	
White-crowned Sparrow	*Zonotrichia leucophrys*	Secure		b	
Le Conte's Sparrow	*Ammodramus leconteii*	Undetermined	L	b	
Nelson's Sharp-tailed Sparrow	*Ammodramus nelsoni (subdubius)*	Undetermined	L	b	
Cedar Waxwing	*Bombycilla cedrorum*	Undetermined	L	b	
Lapland Longspur	*Calcarius lapponicus*	Undetermined		b	
Smith's Longspur	*Calcarius pictus*	Undetermined		b	
Hoary Redpoll	*Carduelis hornemanni*	Undetermined		b	
Purple Finch	*Carpodacus purpureus*	Undetermined	L	b	
American Dipper	*Cinclus mexicanus*	Undetermined	L	b	
Evening Grosbeak	*Coccothraustes vespertinus*	Undetermined	L	b	
Western Wood-Pewee	*Contopus sordidulus*	Undetermined		b	
American Crow	*Corvus brachyrhynchos*	Undetermined	L	b	
Bay-breasted Warbler	*Dendroica castanea*	Undetermined	L	b	
Cape May Warbler	*Dendroica tigrina*	Undetermined	L	b	
Townsend's Warbler	*Dendroica townsendi*	Undetermined	L	b	
Hammond's Flycatcher	*Empidonax hammondii*	Undetermined	L	b	
Dusky Flycatcher	*Empidonax oberholseri (wrightii)*	Undetermined	L	b	
Brewer's Blackbird	*Euphagus cyanocephalus*	Undetermined	L	b	
Common Yellowthroat	*Geothlypis trichas*	Undetermined	L	b	
Varied Thrush	*Ixoreus naevius*	Undetermined		b	
Black-crowned Rosy Finch	*Leucosticte tephrocotis (L. t. tephrocotis)*	Undetermined	L	b	
Song Sparrow	*Melospiza melodia*	Undetermined		b	
Brown-headed Cowbird	*Molothrus ater*	Undetermined	L	b	
Townsend's Solitaire	*Myadestes townsendi*	Undetermined	L	b	
Northern Wheatear	*Oenanthe oenanthe*	Undetermined		b	
Connecticut Warbler	*Oporornis agilis*	Undetermined	L	b	
Mourning Warbler	*Oporornis philadelphia*	Undetermined	L	b	
Lark Sparrow	*Chondestes grammacus*	Undetermined		b	
Hoary Redpoll	*Carduelis hornemanni*	Undetermined		b	
Rose-breasted Grosbeak	*Pheucticus ludovicianus*	Undetermined	L	b	
Sprague's Pipit	*Anthus spragueii*	Undetermined		b	
Yellow Rail	*Coturnicops noveboracensis*	Undetermined		b	
Northern Pintail	*Anas acuta*	Undetermined		b	
Common Goldeneye	*Bucephala clangula*	Undetermined		b	
Barrow's Goldeneye	*Bucephala islandica*	Undetermined		b	
Ruddy Duck	*Oxyura jamaicensis*	Undetermined		b	
Red-necked Grebe	*Podiceps grisegena*	Undetermined	L	b	
Horned Grebe	*Podiceps auritus*	Undetermined	L	b	
Eared Grebe	*Podiceps nigricollis*	Undetermined	L	b	
American Bittern	*Botaurus lentiginosus*	Undetermined	L	b	
Great Blue Heron	*Ardea herodias*	Undetermined	L	b	

Common Name	Scientific Name	Status Rank	Range Note	Decision Process	COSEWIC Status
Philadelphia Vireo	*Vireo philadelphicus*	Undetermined	L	b	
Blue-headed (formerly Solitary) Vireo	*Vireo solitarius*	Undetermined	L	b	
Canada Warbler	*Wilsonia canadensis*	Undetermined	L	b	
Golden-crowned Sparrow	*Zonotrichia atricapilla*	Undetermined	L	b	
Marsh Wren	*Cistothorus palustris*	Vagrant	X	c	
Northern Mockingbird	*Mimus polyglottos*	Vagrant	X	c	
Lazuli Bunting	*Passerina amoena*	Vagrant	X	c	
House Sparrow (English Sparrow)	*Passer domesticus*	Exotic/Alien		b	
European Starling	*Sturnus vulgaris*	Exotic/Alien		b	
Pelican-like birds - Pelecaniformes					
American White Pelican	*Pelecanus erythrorhynchos*	May Be At Risk	L	b	Threatened - 1978; Not at Risk -1987
Double-crested Cormorant	*Phalacrocorax auritus*	Undetermined	L	b	
Woodpecker-like birds - Piciformes					
Northern Flicker	*Colaptes auratus*	Sensitive		b	
Pileated Woodpecker	*Dryocopus pileatus*	Secure	L	b	
Black-backed Woodpecker	*Picoides arcticus*	Secure		b	
Downy Woodpecker	*Picoides pubescens*	Secure		b	
Hairy Woodpecker	*Picoides villosus*	Secure		b	
Three-toed Woodpecker	*Picoides tridactylus*	Secure		b	
Yellow-bellied Sapsucker	*Sphyrapicus varius*	Secure	L	b	
Grebes - Podicipedifromes					
Pied-billed Grebe	*Podilymbus podiceps*	Sensitive	L	b	
Horned Grebe	*Podiceps auritus*	Secure		b	
Red-necked Grebe	*Podiceps grisegena*	Secure		b	Not at Risk - 1982
Eared Grebe	*Podiceps nigricollis*	Vagrant	X	b	
Owls - Strigiformes					
Short-eared Owl	*Asio flammeus*	Sensitive		b	Special Concern - 1994
Boreal Owl (Richardson's Owl)	*Aegolius funereus*	Secure		b	Not at Risk - 1995
Great Horned Owl	*Bubo virginianus*	Secure		b	
Snowy Owl	*Nyctea scandiaca*	Secure		b	Not at Risk - 1995
Great Grey Owl	*Strix nebulosa*	Secure		b	Not at Risk - 1996
Northern Hawk Owl	*Surnia ulula*	Secure		b	Not at Risk - 1992
Long-eared Owl	*Asio otus*	Undetermined		b	
Barred Owl	*Strix varia*	Undetermined	L	c	

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2 Rank is given for the species as a whole. The ranks for the two subspecies present in NWT are: Black Brant (*B. b. nigricans*) = Secure and Gray-bellied Brent - Western High-Arctic (*B.b. hrota x nigricans*) = Sensitive.
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Freshwater Fishes

The freshwater and anadromous (spending some time in marine waters) fish inhabiting the waters of the Northwest Territories (NWT) have unique and diverse histories. Many species now in this area survived under harsh conditions in northern portions of unglaciated Alaska during the last ice age (ending about 10,000 years ago) while the majority survived in southern areas of the United States. A few species survived along what is now coastal British Columbia. Species from all of these areas today thrive in the waters of the Northwest Territories and its Arctic islands and make it one of the most unique areas in Canada.

Lake Trout - Great Slave Lake *B. Ashley*

Fish are cold-blooded creatures, typically with scaly bodies (although burbot and stickleback lack typical scales) and paired fins, that breathe by means of gills. Due to their aquatic life, fish are excellent indicators of water quality and the presence or absence of certain species can provide immediate clues as to the conditions within a given area. Contaminant studies reveal further information about the aquatic environment and, due to the wide consumption of fish in the NWT, contaminant studies on several fish species are done routinely to measure environmental health.

Fishing remains one of the most important cultural and social activities that link the aboriginal inhabitants to the land of the Northwest Territories. While wildlife may be absent from some areas during certain portions of the year, some fish species always remain accessible and thus have played a major role in the well being of the original inhabitants. Fishing played an important role in early trade and early explorers noted the large numbers and varieties of fish in the north. Fishing related activities remain important to the economic and social well being of many residents of the territory. Localised commercial fisheries and world-renowned recreational angling by residents and visitors further reinforce the benefits and need for strong, sustainable fisheries.

With 48 primarily freshwater fish species inhabiting one of the largest rivers in North America, thousands of lakes and a large coastal area (including the Arctic islands), there is no shortage of fishing opportunities in the Northwest Territories. As well as whitefish (both broad whitefish (Coregonus nasus) and lake whitefish (C. clupeaformis)) fisheries, commercial fisheries in the Northwest Territories harvest walleye (pickerel) (Stizostedion vitreum), inconnu (coney) (Stenodus leucichthys), lake trout (Salvelinus namaycush), northern pike (jackfish) (Esox lucius) and burbot (loche) (Lota lota). While most of these fish stocks remain healthy due to a vast area with a low human population, some stocks have been overexploited due to localised fishing pressure. Arctic char (Salvelinus alpinus), a species that many people associate with the north, have been over-harvested in the past and are the subject of community based management plans in some areas. These plans use traditional and scientific knowledge and balance the needs of the community with the ability of the stock to sustain harvesting. Integrated Fisheries Management Plans that involve input from all user groups are being developed for stocks that are subject to fishing pressure from multiple users and at multiple locations.

Some fish species, particularly those with limited habitat during some portion of their lives, are also particularly susceptible to habitat change whether brought about directly by man or through changes to climate. Some stocks have been threatened by gradual habitat changes due to gradual warming and several more may be subject to these same changes. While increased temperatures may benefit those species in the southern part of the NWT and allow them to move further north or expand their range, these same conditions may have detrimental effects on those species that are well adapted to the current climate.

Not all of the freshwater species on the "may be at risk" and sensitive lists are sought after by subsistence, commercial or recreational users. Several are not present in well-populated areas. Thus, their current status may be due to problems we are not aware of or do not yet fully appreciate. An understanding of their life history and a close monitoring of these species are essential for a better and continued awareness of possible changes to our environment.

***Karen Ditz*[1]**
***Dr. S.A. Stephenson*[2]**
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[1]Yellowknife, NT
[2]Inuvik, NT

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Lazuli Bunting	*Passerina amoena*	Vagrant	X	c	
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Pelican-like birds - Pelecaniformes					
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Fish are cold-blooded creatures, typically with scaly bodies (although burbot and stickleback lack typical scales) and paired fins, that breathe by means of gills. Due to their aquatic life, fish are excellent indicators of water quality and the presence or absence of certain species can provide immediate clues as to the conditions within a given area. Contaminant studies reveal further information about the aquatic environment and, due to the wide consumption of fish in the NWT, contaminant studies on several fish species are done routinely to measure environmental health.

Fishing remains one of the most important cultural and social activities that link the aboriginal inhabitants to the land of the Northwest Territories. While wildlife may be absent from some areas during certain portions of the year, some fish species always remain accessible and thus have played a major role in the well being of the original inhabitants. Fishing played an important role in early trade and early explorers noted the large numbers and varieties of fish in the north. Fishing related activities remain important to the economic and social well being of many residents of the territory. Localised commercial fisheries and world-renowned recreational angling by residents and visitors further reinforce the benefits and need for strong, sustainable fisheries.

With 48 primarily freshwater fish species inhabiting one of the largest rivers in North America, thousands of lakes and a large coastal area (including the Arctic islands), there is no shortage of fishing opportunities in the Northwest Territories. As well as whitefish (both broad whitefish (Coregonus nasus) and lake whitefish (C. clupeaformis)) fisheries, commercial fisheries in the Northwest Territories harvest walleye (pickerel) (Stizostedion vitreum), inconnu (coney) (Stenodus leucichthys), lake trout (Salvelinus namaycush), northern pike (jackfish) (Esox lucius) and burbot (loche) (Lota lota). While most of these fish stocks remain healthy due to a vast area with a low human population, some stocks have been overexploited due to localised fishing pressure. Arctic char (Salvelinus alpinus), a species that many people associate with the north, have been over-harvested in the past and are the subject of community based management plans in some areas. These plans use traditional and scientific knowledge and balance the needs of the community with the ability of the stock to sustain harvesting. Integrated Fisheries Management Plans that involve input from all user groups are being developed for stocks that are subject to fishing pressure from multiple users and at multiple locations.

Some fish species, particularly those with limited habitat during some portion of their lives, are also particularly susceptible to habitat change whether brought about directly by man or through changes to climate. Some stocks have been threatened by gradual habitat changes due to gradual warming and several more may be subject to these same changes. While increased temperatures may benefit those species in the southern part of the NWT and allow them to move further north or expand their range, these same conditions may have detrimental effects on those species that are well adapted to the current climate.

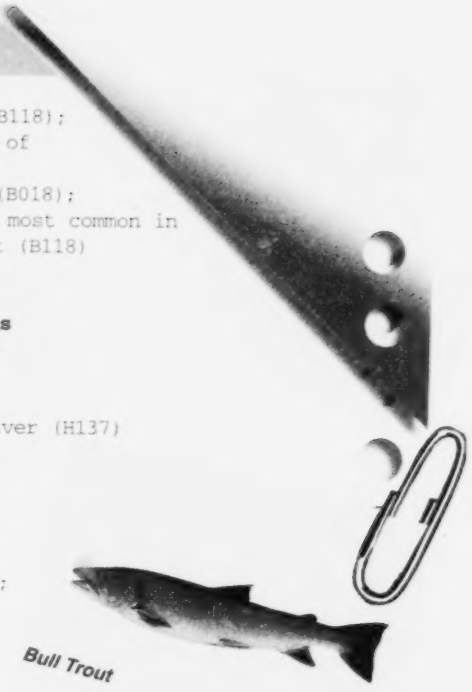
Not all of the freshwater species on the "may be at risk" and sensitive lists are sought after by subsistence, commercial or recreational users. Several are not present in well-populated areas. Thus, their current status may be due to problems we are not aware of or do not yet fully appreciate. An understanding of their life history and a close monitoring of these species are essential for a better and continued awareness of possible changes to our environment.

Karen Ditz[1]
Dr. S.A. Stephenson[2]
Fisheries and Oceans Canada
[1]Yellowknife, NT
[2]Inuvik, NT

Bull Trout **Order** Salmoniformes
Salvelinus confluentus **Family** Salmonidae

General Biology: Number of known subspecies in Canada: 1 (B118); Female age at maturity: blank; Longevity: blank; Frequency of reproduction per year: blank.
Habitat in NWT: Ecozones: Boreal Cordillera, Taiga Plains (B018);
Summer Habitat: Deep pools in large cool rivers and lakes, most common in mountainous areas where snowfeilds and glaciers are present (B118)
Economic notes: sport fishing species (B018)

Abundance and size	Scores
1A. Population size in NWT	**B/C**
unknown (H137)	
1B. Number of occurences in NWT	**B**
found in Liard drainage and southern part of Mackenzie River (H137)	
1C. Summer distribution (% of NWT)	**A**
less than 3%?; only on Liard River drainage and southern portion of Mackenzie River (H137)	
Trend	
2A. Trend in population	**?**
Declining in southern parts of distribution (outside NWT); unknown trend in NWT (H137)	
2B. Trend in distribution	**?**
Unknown in NWT (H137)	
Threats	
3A. Threats to population	**B**
extremely susceptible to perturbation (H139)	
3B. Threats to habitat	
unknown (H137)	


Bull Trout
N. Mochnacz

NWT STATUS Rank May Be At Risk
Salvelinus confluentus

Comments and Notes if any: Restricted to Liard area in NWT, evidence of declines in southern part of range but unknown trends in NWT. Very little work has been conducted on these char other than a few reports in older literature (e.g., 1970's Mackenzie Valley work)
Decision process: Based on comments from Sahtu Renewable Resource Board; suggested status from SRRB = May Be At Risk; Based on information (pers. comm.) by K. Ditz (DFO, Yellowknife) and Dr. James D. Reist (DFO, Winnipeg)
COSEWIC designated Status: blank

Alphanumeric notes are reference codes available with the infobase.
B118 Page, L.M. & Brook, M.B. 1991. A field guide Freshwater Fishes. Peterson Field Guides, Houghton Mifflin Company.
H137 Ditz, K. 2000 Personnal communication. DFO, Yellowknife, NT.
H139 Reist, J.D. 2000. Personnal communication. Arctic Fish Ecology and Assessment Research Section, Fisheries and Oceans Canada, Winnipeg, MB.

Freshwater Fishes

Forty-eight species of fishes can be found in our rivers and lakes. All species ranked in this report use freshwater during at least one period of their life. These include anadromous species, which ascend rivers from the sea to spawn. Three species of freshwater fishes may be at risk, Shortjaw Cisco, Bull Trout and a single stock of the species Inconnu living in the Upper Mackenzie River and Great Slave Lake. These species are on the priority list for a more detailed assessment of their biological status. Species are listed according to the scientific Order they belong to (Latin name), then by their status rank, and finally by their Latin species name.

Common Name	Scientific Name	Status Rank	Range Note	Decision Process	COSEWIC Status
Minnows and Suckers - Cypriniformes					
Pearl Dace	*Margariscus margarita*	Sensitive	L	a	
Longnose Sucker	*Catostomus catostomus*	Secure		a	
White Sucker	*Catostomus commersoni*	Secure		a	
Longnose Dace	*Rhinichthys cataractae*	Secure		a	
Lake Chub	*Couesius plumbeus*	Undetermined		a	
Emerald Shiner	*Notropis atherinoides*	Undetermined	L	a	
Spottail Shiner	*Notropis hudsonius*	Undetermined	L	a	
Northern Redbelly Dace	*Phoxinus eos*	Undetermined	L	a	
Finescale Dace	*Phoxinus neogaeus*	Undetermined	L	a	
Fathead Minnow	*Pimephales promelas*	Undetermined	L	a	
Flathead Chub	*Platygobio gracilis*	Undetermined		a	
Burbot - Gadiformes					
Burbot	*Lota lota*	Secure		a	
Sticklebacks - Gasterosteiformes					
Brook Stickleback	*Culaea inconstans*	Sensitive	L	a	
Ninespine Stickleback	*Pungitius pungitius*	Secure		a	
Goldeye - Osteoglossiformes					
Goldeye	*Hiodon alosoides*	Secure		a	
Perch-like fishes - Perciformes					
Walleye	*Stizostedion vitreum*	Sensitive		a	
Yellow Perch	*Perca flavescens*	Undetermined		a	
Iowa Darter	*Etheostoma exile*	Not Assessed	L	b	
Trout-perches - Percopsiformes					
Trout-Perch	*Percopsis omiscomaycus*	Undetermined		a	
Lampreys- Petromyzontiformes					
American Brook (Darktail) Lamprey	*Lampetra appendix (alaskanse)*	Undetermined		a	
Arctic Lamprey	*Lampetra japonica*	Undetermined		a	
Salmon-like fishes - Salmoniformes					
Shortjaw Cisco	*Coregonus zenithicus*	May Be At Risk		a	Special Concern - 2000
Bull Trout	*Salvelinus confluentus*	May Be At Risk	L	b	

Bull Trout — **Order** Salmoniformes
Salvelinus confluentus — **Family** Salmonidae

General Biology: Number of known subspecies in Canada: 1 (B118); Female age at maturity: blank; Longevity: blank; Frequency of reproduction per year: blank.
Habitat in NWT: Ecozones: Boreal Cordillera, Taiga Plains (B018);
Summer Habitat: Deep pools in large cool rivers and lakes, most common in mountainous areas where snowfields and glaciers are present (B118)
Economic notes: sport fishing species (B018)

Abundance and size	Scores
1A. Population size in NWT	B/C
unknown (H137)	
1B. Number of occurences in NWT	B
found in Liard drainage and southern part of Mackenzie River (H137)	
1C. Summer distribution (% of NWT)	A
less than 3%?; only on Liard River drainage and southern portion of Mackenzie River (H137)	
Trend	
2A. Trend in population	?
Declining in southern parts of distribution (outside NWT); unknown trend in NWT (H137)	
2B. Trend in distribution	?
Unknown in NWT (H137)	
Threats	
3A. Threats to population	B
extremely susceptible to perturbation (H139)	
3B. Threats to habitat	
unknown (H137)	

Bull Trout

N. Mochnacz

NWT STATUS Rank
Salvelinus confluentus

Comments and Notes if any: Restricted to Liard area in NWT, evidence of declines in southern part of range but unknown trends in NWT. Very little work has been conducted on these char other than a few reports in older literature (e.g., 1970's Mackenzie Valley work)
Decision process: Based on comments from Sahtu Renewable Resource Board; suggested status from SRRB = May Be At Risk; Based on information (pers. comm.) by K. Ditz (DFO, Yellowknife) and Dr. James D. Reist (DFO, Winnipeg)
COSEWIC designated Status: blank

Alphanumeric notes are reference codes available with the infobase.
B118 Page, L.M. & Brook, M.S. 1991. A field guide Freshwater Fishes. Peterson Field Guides. Houghton Mifflin Company.
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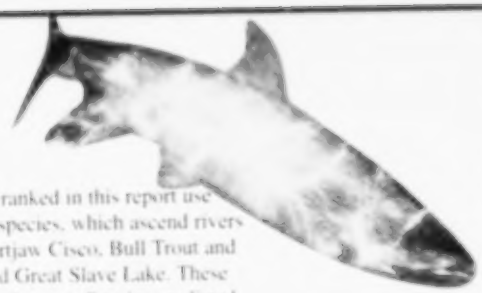
Freshwater Fishes



Forty-eight species of fishes can be found in our rivers and lakes. All species ranked in this report use freshwater during at least one period of their life. These include anadromous species, which ascend rivers from the sea to spawn. Three species of freshwater fishes may be at risk, Shortjaw Cisco, Bull Trout and a single stock of the species Inconnu living in the Upper Mackenzie River and Great Slave Lake. These species are on the priority list for a more detailed assessment of their biological status. Species are listed according to the scientific Order they belong to (Latin name), then by their status rank, and finally by their Latin species name.

Common Name	Scientific Name	Status Rank	Range Note	Decision Process	COSEWIC Status
Minnows and Suckers - Cypriniformes					
Pearl Dace	*Margariscus margarita*	Sensitive	L	a	
Longnose Sucker	*Catostomus catostomus*	Secure		a	
White Sucker	*Catostomus commersoni*	Secure		a	
Longnose Dace	*Rhinichthys cataractae*	Secure		a	
Lake Chub	*Couesius plumbeus*	Undetermined		a	
Emerald Shiner	*Notropis atherinoides*	Undetermined	L	a	
Spottail Shiner	*Notropis hudsonius*	Undetermined	L	a	
Northern Redbelly Dace	*Phoxinus eos*	Undetermined	L	a	
Finescale Dace	*Phoxinus neogaeus*	Undetermined	L	a	
Fathead Minnow	*Pimephales promelas*	Undetermined	L	a	
Flathead Chub	*Platygobio gracilis*	Undetermined		a	
Burbot - Gadiformes					
Burbot	*Lota lota*	Secure		a	
Sticklebacks - Gasterosteiformes					
Brook Stickleback	*Culaea inconstans*	Sensitive	L	a	
Ninespine Stickleback	*Pungitius pungitius*	Secure		a	
Goldeye - Osteoglossiformes					
Goldeye	*Hiodon alosoides*	Secure		a	
Perch-like fishes - Perciformes					
Walleye	*Stizostedion vitreum*	Sensitive		a	
Yellow Perch	*Perca flavescens*	Undetermined		a	
Iowa Darter	*Etheostoma exile*	Not Assessed	L	b	
Trout-perches - Percopsiformes					
Trout-Perch	*Percopsis omiscomaycus*	Undetermined		a	
Lampreys- Petromyzontiformes					
American Brook (Darktail) Lamprey	*Lampetra appendix (alaskensis)*	Undetermined		a	
Arctic Lamprey	*Lampetra japonica*	Undetermined		a	
Salmon-like fishes - Salmoniformes					
Shortjaw Cisco	*Coregonus zenithicus*	May Be At Risk		a	Special Concern - 2000
Bull Trout	*Salvelinus confluentus*	May Be At Risk	L	b	

Common Name	Scientific Name	Status Rank	Range Note	Decision Process	COSEWIC Status
Arctic Cisco	*Coregonus autumnalis*	Sensitive		a	
Least Cisco	*Coregonus sardinella*	Sensitive		a	
Dolly Varden	*Salvelinus malma*	Sensitive	L	a	
Arctic Grayling	*Thymallus arcticus*	Sensitive		a	
Cisco (Lake Herring)	*Coregonus artedi*	Secure		a	
Lake Whitefish	*Coregonus clupeaformis*[1]	Secure		a	
Humpback Whitefish	*Coregonus pidschian*[1]	Secure		b	
Broad Whitefish	*Coregonus nasus*	Secure		a	
Northern Pike	*Esox lucius*	Secure		a	
Arctic Char	*Salvelinus alpinus*[4]	Secure		a	
Lake Trout	*Salvelinus namaycush*	Secure		a	
Inconnu (Coney)	*Stenodus leucichthys*[2]	Secure		a	
Pond Smelt	*Hypomesus olidus*	Undetermined		a	
Chum Salmon	*Oncorhynchus keta*	Undetermined	L	c	
Rainbow Smelt	*Osmerus mordax*	Undetermined		a	
Round Whitefish	*Prosopium cylindraceum*	Undetermined		a	
Pink Salmon	*Oncorhynchus gorbuscha*	Vagrant	X	b	
Coho Salmon	*Oncorhynchus kisutch*	Vagrant	X	b	
Sockeye Salmon	*Oncorhynchus nerka*	Vagrant	X	a	
Chinook Salmon	*Oncorhynchus tshawytscha*	Vagrant	X	b	
Bering Cisco	*Coregonus laurettae*	Not Assessed	L	b	
Sculpins - Scorpaeniformes					
Fourhorn Sculpin	*Myoxocephalus quadricornis*[3]	Sensitive	L	b	Fresh water form (Arctic Islands) = Vulnerable - 1989
Deepwater Sculpin	*Myoxocephalus thompsoni*	Sensitive		a	
Slimy Sculpin	*Cottus cognatus*	Undetermined		a	
Spoonhead Sculpin	*Cottus ricei*	Undetermined		a	

1 General Status Ranks are given for both Lake and Humback Whitefish as taxonomically distinct species: *Coregonus clupeaformis*, *C. pidschian*. However, these species cannot be distinguished using standard morphometric methods. The relative distribution of each species in the NWT is still unclear.

2 General Status Rank is given for the whole species Inconnu (*Stenodus leucichtys*), but one stock, in the Upper Mackenzie River and Great Slave Lake system is given a Rank of May Be at Risk.

3 Fourhorn Sculpin (*Myoxocephalus quadricornis*) is a marine species, but a freshwater form exists in some lakes on the Arctic islands of NWT. The Rank is given for the freshwater form only.

4 General Status Rank is given for the whole species Arctic Char (*Salvelinus arcticus*), but two stocks, in the Hornaday River and the Kuujjua River, were given a Rank of Sensitive.

L = Species at the limit or edge of range in NWT. Small distribution (less than 10% of NWT), hence small numbers are expected.

X = Usual range of species not in NWT.

a Decision drafted by Committee.

b Decision based on printed information and comments from one to three experts.

c Decision based on printed information only

Amphibians and Reptiles

Amphibians and reptiles are often overlooked, but nevertheless represent a very important component of most healthy ecosystems. In the Northwest Territories amphibians are present in all ecozones south of the treeline - from the Slave River Lowland to the Mackenzie Delta. Reptiles, represented by a single species, are probably restricted to the Slave River Lowland and Taiga Plain.

Amphibians are vertebrate animals with a bony internal skeleton and a well-developed brain. They are cold-blooded - that is their internal temperature depends on that of the surrounding environment. Amphibians generally have soft, moist skin without scales. Their eggs do not have shells and must be laid in the water to keep them from drying out. Subsequently, amphibians go through a two-stage life cycle with a gilled aquatic larval form (tadpole) followed by a more or less terrestrial lung-breathing adult.

Wood Frog G. Calef

The amphibians present in the Northwest Territories include members of three (perhaps four) different families. The Tree Frog family (Hylidae) is represented by a single species - the Chorus Frog. The true frogs family (Ranidae) are represented by two species - the Wood Frog and the Northern Leopard Frog. Members of the toad family (Bufonidae) also include two species - the Canadian Toad and Boreal Toad. A single species from the mole salamander family (Ambystomatidae), the Long-toed Salamander, may occur in the extreme southwestern corner of the territory but this needs to be verified based on local knowledge, or with a photograph or specimen.

Reptiles are similar to amphibians in that they are cold-blooded vertebrate organisms. However, they generally have dry scaly skin and lay shelled eggs on land or give live birth. Reptiles are represented in the Northwest Territories by a single species - the Red-sided Garter Snake (family Colubridae). There is some evidence to suggest that a second member of this family, the wandering garter snake, may also occur here. We have no endemic turtles or lizards.

All amphibians and reptiles present in the Northwest Territories are living at or very near the extreme northern limits of the species range in North America. Although we don't know the full extent of their special adaptations to northern climatic conditions, the range of adaptations currently understood underscores the scientific and ecological importance of these northernmost populations.

There are a number of unique features of amphibian physiology and life history which make them particularly vulnerable to adverse effects of environmental change including; tolerance of a relatively narrow range of temperature and moisture regimes, a life history that involves an aquatic and a terrestrial phase, a complex chemically mediated transformation from larva to adult and from gill-breathing to lung-breathing, and a moist permeable skin which readily absorbs chemicals from the environment at both stages of life.

Populations of amphibians (in particular) and reptiles have declined in many parts of the world and some species have completely disappeared. Although the causes of some declines are known to be the result of human activities, largely due to habitat loss and pollution of aquatic environments, the reasons for the declines of other species are not well understood. Changes in weather patterns (global climate change) and increases in levels of ultraviolet radiation (ozone depletion) may also have negative effects on some amphibian populations. Northern Leopard Frogs and Canadian Toads have declined in parts of southern Canada, and this fact, combined with their uncommon occurrence and restricted distribution in the Northwest Territories provides reason for concern. At present, we do not have enough information to determine if there have been declines in northern populations of any species, or what factors might affect these populations currently or in the future. Only effective long-term monitoring programs can answer these questions.

Mike Fournier
Canadian Amphibian and Reptile Conservation Network
Northwest Territories Co-ordinator
Ecology North

Common Name	Scientific Name	Status Rank	Range Note	Decision Process	COSEWIC Status
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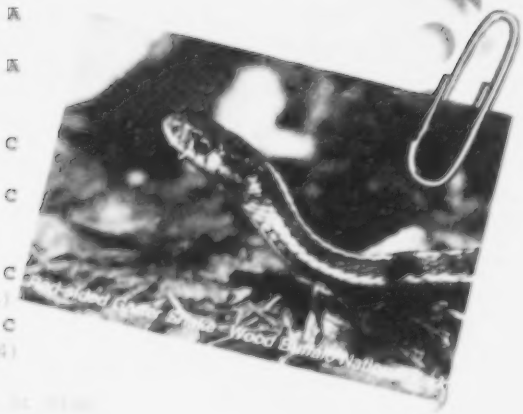
Mike Fournier
Canadian Amphibian and Reptile Conservation Network
Northwest Territories Co-ordinator
Ecology North

Red-sided Garter Snake **Order** Serpentes
Thamnophis sirtalis **Family** Colubridae

General Biology: Number of known subspecies in Canada: 5 (B106);
Female age at maturity: Unknown (A104); Longevity Unknown (A104);
Frequency of reproduction per year: 1, 0.5 or <0.5 (A104)
Habitat in NWT: Breeding ecozones: Boreal Plains (A104, B008);
Habitat: summer = marshy areas
winter = crevices and caves (P007, A104)
Economic notes: important ecosystem functions (A103)

	Scores
Abundance and size	
1A. Population size in NWT	B/C
Unknown (A104)	
1B. Number of occurences in NWT	A
2 (P007, A104)	
1C. Summer distribution (% of NWT)	A
1% (A104)	
Trend	
2A. Trend in population	C
Unknown (A104)	
2B. Trend in distribution	C
Unknown (H108)	
Threats	
3A. Threats to population	C
road mortality, disturbance at denning sites (P007, A104)	
3B. Threats to habitat	C
disturbance or destruction of denning sites (P007, A104)	



NWT Status Rank
Thamnophis sirtalis

Comments and Notes if any: Due to small number of occurrences
COSEWIC designated Status: (blank if none exist)

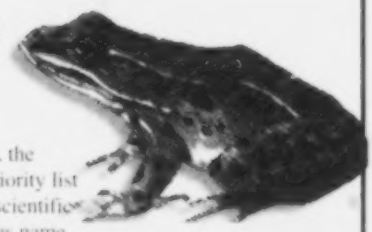
Alphanumeric notes are reference codes available with the infobase.

A104 Larsen, K.W. & Gregory, P.T.1988. Amphibians and reptiles in the Northwest Territories. Occasional Papers of the Prince of Wales Northern Heritage Centre, No. 3: The Natural History of Canada's North: Current Research. Kobelka C and Stephens C (editors). 31 -51. Prince of Wales Northern Heritage Centre, Yellowknife.

H108 Fournier, M.A. 1999. Personal Communication.

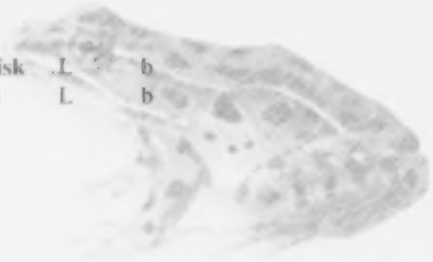
P007 Fournier, M.A.1999. Amphibians & Reptiles in the Northwest Territories. Public pamphlet. Ecology North & other agencies.

Reptiles and Amphibians



There are six species of amphibians and two species of reptiles in the NWT. One amphibian, the Canadian Toad, and one reptile, the Red-sided Garter Snake may be at risk and are on the priority list for a more detailed assessment of their biological status. Species are listed according to the scientific Order they belong to (Latin name), then by their status rank, and finally by their Latin species name.

Common Name	Scientific Name	Status Rank	Range Note	Decision Process	COSEWIC Status
Frogs & Toads - Anura					
Canadian Toad	*Bufo hemiophrys*	May Be At Risk	L	b	
Boreal Chorus Frog	*Pseudacris (triseriata) maculata*	Sensitive		b	
Northern Leopard Frog	*Rana pipiens*	Sensitive	L	b	
Wood Frog	*Rana sylvatica*	Secure		b	
Western Toad	*Bufo boreas*	Undetermined	L	b	
Salamanders - Caudata					
Long-Toed Salamander	*Ambystoma macrodactylum*	Undetermined	L	b	
Snakes- Serpentes					
Red-sided Garter Snake	*Thamnophis sirtalis*	May Be At Risk	L	b	
Western Terrestrial Garter Snake	*Thamnophis elegans*	Undetermined	L	b	



L = Species at the limit or edge of range in NWT. Small distribution (less than 10% of NWT), hence small numbers are expected.

X = Usual range of species not in NWT.

a Decision drafted by Committee.

b Decision based on printed information and comments from one to three experts.

c Decision based on printed information only.

Vascular Plants - Ferns and Orchids

Vascular plants have a special organ called xylem (a tube-like system to transport nutrients and water in their stems) and typically have roots and leaves. They appeared on earth 400 million years ago, about 100 million years after the appearance of some of the non-vascular plants. Vascular plants evolved to use spores (as in modern ferns) and then seeds (as in flowering plants) to reproduce. There are at least 1200 species of vascular plants in the Northwest Territories.

Ferns

Ferns were the first plants to evolve roots and leaves. Ferns flourished in the Carboniferous period or the Coal Age, about 300 million years ago. During that period amphibians evolved and the first egg-laying reptiles roamed the damp fern forests. Modern ferns are vascular plants that do not produce flowers, but reproduce using spores and by going through a leafless form called a gametophyte.

Fragrant Shield Fern

Twenty species of ferns are known to exist in the Northwest Territories. Some ferns are at the limit of their distribution, occurring only in or near the Mackenzie Mountains, especially near hot springs (e.g., Dryopteris expansa).

Orchids

The orchid family is a large group mostly found in the tropics. Orchid flowers are delicate, scented and sometimes have very ornate patterns. The majority of orchids require a symbiotic relationship between their roots and soil fungi to germinate. Orchids in the NWT are best viewed in the natural environment because this intimate relationship with soil fungi make them extremely difficult to transplant.

Nineteen species of orchid have been observed in the NWT. One species (Platanthera dilatata) has only been found near hot springs in the Mackenzie Mountains. Most orchids grow best in moist habitat; they may be found wherever water seeps or flows near the surface in woods and meadows (e.g., Amerorchis rotundifolia, Round-leaved Orchis), or even in road ditches (e.g., Cypridedium calceolus, Yellow Lady's slipper).

Monitoring plants

Why should we record information on plants?
Amateur and professional botanists, users of medicinal plants, and scientists conducting environmental impact assessments yearly identify new locations of rare plants in the North. However, we still know little about most rare plant species in the NWT.

Plants are sensitive to environmental factors such heat, solar radiation, and precipitation. Early blooming plants are typically more sensitive to heat. By recording bloom dates of early spring-flowering plants over a long period of time, trends such as climate change can be observed.

Plant phenology (study of the seasonal timing of plant life cycle events) is not new in Canada, with data going back to the early 1800s. However, the national and international coordination of plant monitoring efforts is relatively recent. The International Tundra Experiment (ITEX) uses standard techniques to research the effects of increased CO_2 and temperature on arctic plants.

A new Canada-wide plant-monitoring program (Plantwatch Canada) will be launched in early 2001, with a section specific to the NWT (Plantwatch NWT). Plantwatch NWT is volunteer-based and is looking for enthusiastic and dedicated people who want to learn more about plants and our environment.

Jennifer Morin
Coordinator
Plantwatch NWT

Round-leaved Orchis **Class** Monocotyledoneae
Amerorchis rotundifolia **Family** Orchidaceae

General Biology: Number of known subspecies in Canada; blank;
Age at maturity: blank; Longevity: perennial (B003); Frequency of seed reproduction: blank; Vegetative reproduction: rhizome (B003)
Habitat in NWT: Breeding ecozones:Taiga Cordillera, Taiga Plains, Taiga Shield, Boreal Cordillera; Habitat: moist, well-drained calcareous soils of open woods (B003)
Economic notes: blank
Canadian Conservation significance: blank

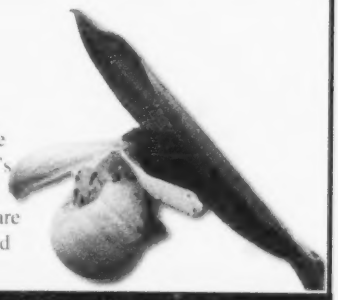
Abundance and size	Scores
1A. Population size in NWT	C
frequent (H126)	
1B. Number of occurrences in NWT	C
28 known (B003)	
1C. Summer distribution (% of NWT)	C
36% (B003)	
Trend	
2A. Trend in population	?
2B. Trend in distribution	C
Presumed stable (H126)	
Threats	
3A. Threats to population	C
Potential destruction of habitat- sites (B003)	
3B. Threats to habitat	C
Forestry and seismic lines in some areas (H126)	
NWT Status Rank	Secure
Amerorchis rotundifolia	

Round-leaved Orchis C. Bucher

Comments and Notes if any: Little known of trends, and numbers
Decision process: Drafted by non-expert based on printed material.
COSEWIC designated Status: none

Alphanumeric notes are reference codes available with the infobase.
B003 Porsild, A.E. & Cody, W.J. 1980. Vascular Plants of Continental Northwest Territories, Canada. National Museums of Canada.
H126 Carrière, S. 2000. Personnal communication. Ecosystem Management Biologist; RWED

Ferns and Orchids



There are twenty-two species of ferns and nineteen species of orchids in the NWT. Of these, one species of fern, the Parsley Fern (*Cryptogramma sitchensis*), and two species of orchids, Loesel's Twayblade (*Liparis loeselii*) and Bog Adder's Mouth (*Malaxis paludosa*) may be at risk. These species are on the priority list for a more detailed assessment of their biological status. Species are listed according to the scientific Order they belong to (Latin name), then by their status rank, and finally by their Latin species name.

Common Name	Scientific Name	Status Rank	Range Note	Decision Process	Canadian Conservation Significance[1]
Ferns - Pteridophyta					
Parsley Fern	*Cryptogramma (crispa) sitchensis*	May be at Risk		c	Rare in Canada
Green Spleenwort	*Asplenium trichomanes- ramosum*	Sensitive		c	
Fragile Rock-brake	*Cryptogramma stelleri*	Sensitive		c	
Shield Fern sp.	*Dryopteris expansa*	Sensitive	L	c	
Cliff Brake spp.	*Pellae glabella*	Sensitive	L	c	
Mountain Parsley	*Cryptogramma acrostichoides*	Secure		c	
Fragile Fern	*Cystopteris fragilis*	Secure		c	
Fragrant Shield Fern	*Dryopteris fragrans*	Secure		c	
Nahanni Oak Fern	*Gymnocarpium jessoense*	Secure		c	
Polypody	*Polypodium sibiricum*	Secure		c	
Smooth Woodsia	*Woodsia glabella*	Secure		c	
Rusty Woodsia	*Woodsia ilvensis*	Secure		c	
Lady-fern	*Athyrium filix-femina*	Undetermined	L	c	
Mountain Bladder Fern	*Cystopteris montana*	Undetermined	L	c	
Shield Fern sp.	*Dryopteris carthusiana*	Undetermined	L	c	
Oak Fern	*Gymnocarpium dryopteris*	Undetermined	L	c	
Ostrich Fern	*Matteuccia struthiopteris*	Undetermined	L	c	
Beech Fern	*Phegopteris connectius*	Undetermined	L	c	
Holly Fern	*Polystichum lonchitis*	Undetermined	L	c	
Northern Woodsia	*Woodsia alpina*	Undetermined		c	
Rock Mountain Woodsia	*Woodsia scopulina (oregana)*	Undetermined	L	c	
Rock Polypody	*Polypodium virginianum*	Not Assessed	L	c	
Orchids - Orchidaceae					
Loesel's Twayblade	*Liparis loeselii*	May Be At Risk	L	c	Disjunct
Bog Adder's Mouth	*Malaxis paludosa (Hammarbya paludosa)*	May Be At Risk	L	c	Rare in Canada; Disjunct
Round-leaved Orchid	*Platanthera (Habenaria) orbiculata*	Sensitive	L	c	
Round-leaved Orchis	*Amerorchis rotundifolia*	Secure		c	
Fairy-slipper (Venus'-slipper)	*Calypso bulbosa*	Secure		c	
Early (Pale) Coral Root	*Corallorhiza trifida*	Secure		c	
Yellow Lady's Slipper	*Cypridedium parviflorum*	Secure		c	
Spotted Lady's Slipper	*Cypridedium guttatum*	Secure		c	

Common Name	Scientific Name	Status Rank	Range Note	Decision Process	Canadian Conservation Significance[1]
Sparrow's-egg Lady's Slipper	*Cypripedium passerinum*	Secure		c	
Dwarf Rattlesnake Plantain	*Goodyera repens*	Secure		c	
Northern Twayblade	*Listera borealis*	Secure		c	
Northern Green Orchid	*Platanthera (Habenaria) hyperborea (equilonis)*	Secure		c	
Small Northern Bog Orchid	*Platanthera (Habenaria) obtusata*	Secure		c	
Hooded Ladies' -tresses	*Spiranthes romanzoffiana*	Secure		c	
Long-bracted Green Orchid	*Coeloglossum (Habenaria) viridis*	Undetermined	L	c	
Stemless Lady's slipper	*Cypripedium acaule*	Undetermined	L	c	
Heart-leaf Twayblade	*Listera cordata*	Undetermined	L	c	
White Adder's Mouth	*Malaxis monophylla (brachypoda)*	Undetermined	L	c	
White Orchid	*Platanthera (Habenaria) dilatata*	Undetermined	L	c	

L = Species at the limit or edge of range in NWT. Small distribution (less than 10% of NWT), hence small numbers are expected.
X = Usual range of species not in NWT.
a Decision drafted by Committee.
b Decision based on printed information and comments from one to three experts.
c Decision based on printed information only.
1 No detailed assessment of status was made by COSEWIC. The Canadian Conservation significance is a simple statement of rarity in Canada.

Common Name	Scientific Name	Status Rank	Range Note	Decision Process	Canadian Conservation Significance[1]
Sparrow's-egg Lady's Slipper	*Cypripedium passerinum*	Secure		c	
Dwarf Rattlesnake Plantain	*Goodyera repens*	Secure		c	
Northern Twayblade	*Listera borealis*	Secure		c	
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Heart-leaf Twayblade	*Listera cordata*	Undetermined	L	c	
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White Orchid	*Platanthera (Habenaria) dilatata*	Undetermined	L	c	

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6 Results – What was learned?

The Northwest Territories has vast expanses of undisturbed habitat, where some of the largest herds of migratory herbivores, like caribou, still exist, and where predator-prey relationships are intact[1]. However, northern ecosystems are under increasing pressures[14]. These pressures can have distant sources, such as air-borne pollution or economic decisions made far from our communities, or be long-term, such as climate change; they can have localized sources, such as over-exploitation, or have regional effects, such as habitat changes following forestry and non-renewable resource development.

The monitoring of the status of NWT species is already helping us detect changes in species distribution, population numbers, and threats. These changes form a picture of a land in transition.

During this first evaluation of the general status of six groups of NWT species, we learned:

About NWT Species

- The distribution of some species that primarily live in more southern regions of North America is moving slowly northward. For example, the White-tailed Deer, the Coyote, the Magpie, and some species of fishes, ducks and forest birds are seen more often than before in the NWT.

- The ecology, distribution and population status of some species is well known, despite difficult conditions due, in part, to the high costs of studying species in the North. However, we do not have enough information to evaluate the status of 27% of the species listed in this report. Even among the best known groups of species, we still need to increase our knowledge base. Information and data on NWT species can be added every year as more areas are investigated and both northerners and NWT visitors report their findings.

- About one quarter of the mammal and bird species found in the NWT are at the edge of their distribution. Furthermore, three-quarters of NWT amphibians and reptiles are present only in our most southern regions. Some species of orchids are found in the NWT only because a very special place is available for them: hot springs in the Mackenzie Mountains. The status of these NWT populations of species living at the edge of their distribution is not well known. They may have special adaptations and strategies for coping with a life on the edge.

- Many species listed as "May Be At Risk" naturally have very small population sizes because of their very specific habitat requirements, or because they are at the edge of their distribution. Their very small populations, located in very few sites, may make these species sensitive to any threats to their populations or habitats.

About Monitoring

- The coordination of a monitoring program among different agencies and knowledgeable people in the North is now possible, facilitated by electronic technologies and our common wish to share information and foster partnerships in monitoring biodiversity.

- This project is NOT creating a new network to study and monitor species, but simply pulls together current efforts in an attempt to summarize information, then build and share our common knowledge. This monitoring project should build on existing capacity.

- There is already a need for current species lists in many sectors, such as tourism, forestry, impact assessment studies, community conservation planning, and international reporting on sustainable development. A standard list of species present in the NWT helps to meet that need.

- Not all criteria and indicators are completely relevant to all kind of species. The evaluation system has to be flexible enough to be able to adapt to different groups of species. For example, some species may appear to be rare simply because few people are reporting their presence, whereas other species may be rare because they were subject to extensive exploitation. The evaluation system must be able to reflect these important differences. No evaluation system will be perfect for all species. Suggestions for future improvements of the criteria and indicators should be carefully implemented. *

About Future Challenges and Opportunities

- National monitoring efforts — commonly performed across southern Canada — are not fully implemented in NWT. We need tools to facilitate community-based monitoring. Adapting national tools and standards to the northern perspective may be complemented by the development of new tools specific to Northerners. These tools would give Northerners access to the information they need to integrate resource development and conservation.

- All Northerners, especially those with traditional and local knowledge of the land, have rich, useful and relevant information to share about the status of NWT species. If agreeable to the knowledge-holders, we should facilitate the input and sharing of this knowledge by all Northerners, while respecting the need to preserve that knowledge for future generations.

- Changes in the general status and ranks of species may tell us about changes in our northern ecosystems that will affect human development and health. Links between this project and initiatives of cumulative impact assessments in the NWT should be kept open and new opportunities fostered.

Our Commitments under the Accord for the Protection of Species at Risk in Canada

On November 30, 1996, Wildlife Ministers in Canada agreed to implement programs that would prevent species in Canada from becoming extinct as a consequence of human activities. The approach is outlined in the **Accord for the Protection of Species at Risk in Canada**.

The Accord recognizes that governments have a leadership role in providing sound information.

An important first step in providing effective protection for species at risk is to prevent species from ever becoming at risk. The Accord recognizes this principle by calling for the establishment of a program to monitor, assess and report regularly on the status of all wild species. Monitoring the general status of all NWT species helps to do this.

Excerpt from the Accord for the Protection of Species at Risk:

"Federal, provincial and territorial Ministers responsible for wildlife commit to a national approach for the protection of species at risk.
The goal is to prevent species in Canada from becoming extinct as a consequence of human activity.

We agree to:
iii) establish...programs...that will...
j. monitor, assess and report regularly on the status of all wild species;..."

In the spirit of the Accord, in 1998, the Wildlife and Fisheries Division, Department of Resources, Wildlife and Economic Development, Government of the Northwest Territories became the lead agency in a project designed to fulfill its commitment to monitor the status of wild species in the Northwest Territories. This document is a report on the work done so far. The project will continue, working closely with governments, co-management boards, universities, research firms and knowledgeable residents.

Link to www.speciesatrisk.gc.ca/gss

In the future, species that are ranked as May Be At Risk in this report, would be of highest priority for detailed assessment in the NWT.

Link to www.nwtwildlife.RWED.gov.nt.ca

Canadian Species at Risk Programs

The evaluation system described in this report uses general criteria to determine whether a species is doing well or may be at risk and hence merits a more detailed assessment. In Canada, the recognized body of experts who assess the status of wild Canadian species in detail is called the **Committee on the Status of Endangered Species in Canada (COSEWIC)**. This report, with its lists of NWT species ranked from Secure to May Be At Risk will be one of the main tools used by COSEWIC to set priorities on which species should be assessed in more detail.

Link to www.cosewic.gc.ca

In this report, a species occurring in the NWT that has been determined by COSEWIC to be either "Endangered" or "Threatened" was ranked as At Risk. These species will be re-assessed by COSEWIC in their normal five to ten year re-assessment schedules. Species that are the highest priority for detailed assessment by COSEWIC are ranked as May Be At Risk in this report.

Programs in Other Territories, Provinces, and Countries

The evaluation system described in this report uses criteria that are shared by all other Canadian jurisdictions.

This system is also similar to methods used internationally, including the largest co-ordinated effort in the Americas to gather standardized data on plants, animals, and ecosystems by Natural Heritage programs. **Conservation Data Centres (CDC)**, the active component of Natural Heritage programs, exist in all Canadian provinces but are absent from Nunavut, Yukon, and the Northwest Territories.

Link to www.heritage.tnc.org

The present project, with similar projects in Yukon and Nunavut, is the first attempt to co-ordinate efforts and share information about biodiversity by Northerners in Northern Canada. The **NWT Species Monitoring Infobase** developed for this exercise is fully compatible with the information catalogue used in Nunavut. Agreements for exchanging data and information about northern species among territories and provinces are ongoing.

International Conventions and Agreements - Canadian Context

At the 1992 Conference on the Environment and Development in Rio de Janeiro, Brazil, Canada became a signatory to the **United Nations Convention on Biological Diversity**. An important principle of the Convention on Biological Diversity is to provide support for the inventory and monitoring of biodiversity.

Link to www.biodiv.org

In 1996, the **Canadian Biodiversity Strategy** was developed with the help of experts from governments, industry, the scientific community, conservation groups, and indigenous organizations, to apply the Convention to the Canadian context. A series of strategies were suggested to increase our ability to inventory and monitor biodiversity in Canada.

Link to www.bco.ec.gc.ca/

Excerpt from the United Nations Convention on Biological Diversity. Article 7

Article 7

"a) Identify components of biodiversity important for its conservation and sustainable use.

b) Monitor...the components of biodiveristy...paying particular attention to those requiring urgent conservation measures and those which offer the greatest potential for sustainable use.

c) Identify processes and categories of activities which have or are likely to have significant adverse impacts on the conservation and sustainable use of biodiveristy and monitor their effects through sampling and other techniques"

The monitoring project initiated with this report follows the main directions adopted in the Canadian Biodiversity Strategy to improve biodiversity monitoring:

- improving and linking existing biological inventories,
- enabling agencies and individuals to contribute to a shared knowledge base, and
- sharing information and networking with Conservation Data Centres and Natural Heritage Centers.

At the 1992 Rio Conference, and during the following years, Canada also acknowledged the need to develop forests in a sustainable manner. In 1995, after extensive consultations with the public and the forestry community, the Canadian Council of Forest Ministers presented a report called "**Defining Sustainable Forest Management: A Canadian Approach to Criteria and Indicators**", describing how Canada will measure its progress toward implementing the conservation, management and sustainable development of forests. In 1998, the National Forest Strategy reinforced our commitment to report on our progress on a regular basis.

One of the six essential criteria for measuring sustainability in forest development is the conservation of biological diversity. The current species monitoring exercise greatly enhances our capacity to report changes in all the indicators related to conservation of forest-dwelling species.

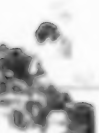
Link to www.nrcan.gc.ca/cfs/proj/ppiab/sof

In 1991, at Rovaniemi, Finland, the governments of Canada, Denmark/Greenland, Finland, Iceland, Norway, Russia, Sweden and the United States adopted the Arctic Environmental Protection (AEP) Strategy. The Arctic Council, established in 1996, oversees the programs created under the AEP Strategy, including the **Conservation of Arctic Flora and Fauna (CAFF)**.

Link to www.arctic-council.usgs.gov/

One of the mandates of CAFF is to help implement some of the objectives of the **United Nations Convention on Biological Diversity** in the Arctic, with its special challenges. CAFF's mandate includes leading a voluntary program for monitoring circumpolar biodiversity, "paying particular attention to populations, species, habitats, and ecosystems, which are of greatest ecological, cultural, social, economic or scientific value".

The present report, with its system for evaluating species' status and threats across the Arctic, should prove a valuable asset during the implementation of a circumpolar monitoring network. Such a network would increase our ability to share information about species and threats common to all Arctic regions.



Traditional Knowledge, Wildlife Studies, Land Use and Protected Area Planning, Impact Assessment and Cumulative Impact Monitoring

Linking wildlife research and traditional ecological knowledge to economic and ecological decisions is challenging. Impact assessments can be done at different scales. However, whether we study the potential impact of a specific development project or we implement a community-based cumulative impact study, a list of species that may be at risk and are present in the area of interest is an essential component of the study.

The project initiated here will provide a tool to exchange information about practical indicators of a species' status:

- What is the species?
- Where and how many populations are there?
- What are the trends in their numbers and distribution?
- What are the threats to the populations or habitats?

Complex results from wildlife research and complex concepts that are conveyed by Traditional Knowledge are integrated into the evaluation system using these indicators. This provides easier access to information that can be readily translated into decisions affecting, for example, our conservation efforts, our economic development, or our land-use planning.

2. Reporting in 2035 – How can everyone participate?

Only 1% of the estimated total number of species occurring in the Northwest Territories have been ranked in this report. This seems miniscule but it is a good beginning. Most of the species that are best known, the vertebrates, have been ranked. We also began the long process of ranking the vascular plants known to occur in the NWT. Marine fishes remain to be ranked. The next few reports will also provide us with an opportunity to tally our common knowledge of some groups of invertebrates: the butterflies and the molluscs.

The information gathered for this exercise will be updated and improved in a continuous fashion. The information will come from new publications and studies and from knowledgeable people like you.

We invite you to share your observations and your knowledge by participating in any of the monitoring programs available in the Northwest Territories. This information will be summarized and shared with you in the form of species listed and ranked according to their biological status and an updated and current infobase, where you will find referenced information grouped by species.

1 Rickletts, T. H., Dinerstein, E., Olson, D. M., Louks, C. J., Eichbaum, W., DellaSala, D., Kavanagh, K., Hedao, P., Hedao, P. Hurley, P., Carney, K.M., Abell, R. and Walters, S. 1999. **Terrestrial Ecoregions of North America. A Conservation Assessment**. Island Press, Washington, D.C.

2 Trenhaile, A. 1990. **The Geomorphology of Canada**. Oxford University Press, Toronto.

3 Percy, R. Smiley, B. Mullen, T. 1985. **Fishes, Invertebrates and Marine plants. The Beaufort Sea and the Search for Oil**. Dept. of Fisheries and Oceans, Ottawa.

4 French, H.M., and Slaymaker, O. 1993. **Canada's cold environments**. McGill-Queen's University Press, Montreal.

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7 Caughley, G. and Gunn A. 1996. **Conservation biology in theory and practice**. Blackweel Science, Oxford, England.

8 Wilson, E. O. 1992. **The diversity of life**. Harvard University Press, Cambridge, Mass.

9 Association for Biodiversity Information. 1999. **Downloadable data sets**. http://www.abi.org/. Natural Heritage Central Databases. Association for Biodiversity Information, Arlington, VA.

10 Wilson, E. O. 1988. **Biodiversity**. National academy Press, Washington D.C.

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12 Government of Canada. 1996. **The state of Canada's environment**. Public Works and Government Services, Ottawa.

13 Bastedo, J. 1994. **Shield Country**. Arctic Institute of North America of the University of Calgary, Calgary.

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NWT Species on the COSEWIC List as of 2000

Mammals

Endangered
Peary Caribou (*Rangifer tarandus pearyi*): Banks Island population
Peary Caribou (*Rangifer tarandus pearyi*): High Arctic population

Threatened
Peary Caribou (*Rangifer tarandus pearyi*): Low Arctic population
Wood Bison (*Bison bison athabascae*)
Woodland Caribou[1] (*Rangifer tarandus caribou*): Boreal population

Special Concern (previously Vulnerable)
Grizzly Bear (*Ursus arctos*)
Polar Bear (*Ursus maritimus*)
Wolverine (*Gulo gulo*): Western population

Birds

Endangered
Eskimo Curlew (*Numenius borealis*)
Whooping Crane (*Grus americana*)

Threatened
Peregrine Falcon (*Falco peregrinus anatum*): subspecies anatum

Special Concern (previously Vulnerable)
Ivory Gull (*Pagophila eburnea*)
Ross' Gull (*Pagophila rosea*)
Peregrine Falcon (*Falco peregrinus tundrius*): subspecies tundrius
Short-eared Owl (*Asio flammeus*)
Yellow Rail (*Coturnicops noveboracensis*)

Fish and Marine Mammals

Endangered
Bowhead Whale (*Balaena mysticetus*): Western Arctic populations

Special Concern (previously Vulnerable)
Blackline Prickleback (*Acantholumpenus mackayi*)
Fourhorn Sculpin (*Myxocephalus quadricornis*): Arctic Islands freshwater form
Shortjaw Cisco (*Coregonus zenithicus*)

[1] Changed since 1999.
[2] Status provisional until reviewed by COSEWIC's Aboriginal Traditional Knowledge Group.

Monito-RING infosheet

To Contact the Regional Biologists

Ft Smith Region
(867) 872 6449
Inuvik Region
(867) 777 7311
North Slave Region
(867) 873 7783
Sahtu Region
(867) 587 2786

Any Questions About Forests (867) 872-7725

To Report a Forest Fire

(800) 661 0800

To Report a Fishing Violation

(800) 222 TIPS

Any Questions About Fish or Fisheries in the NWT

Department of Fisheries & Oceans
Yellowknife (867) 669 4900
Inuvik (867) 777 7500
Hay River (867) 874-5570

To Report Observations of Amphibians or Reptiles in the NWT - Frog Watch

(867) 873 6618
e-mail: faunabor@ssimicro.com

To Report Observations of Plants in the NWT

Plant Watch NWT
(867) 873 5592
e-mail: protea76@hotmail.com

To Report Observations of Birds in the NWT:

NWT Bird Checklist Survey
www.NWTChecklist.com
Fax (867) 873 8185
To Report a **Banded Bird**
(800) 327-BAND (2263)

To Report Diseased Wildlife

Wildlife Disease Specialist
(867) 873 7761

To Report a Spill of Oil Chemicals or other Hazardous Materials

NWT 24hour Spill Report Line
(867) 920 8130 (Collect calls accepted)

Contact your Local Wildlife Officer in these communities

Aklavik
Ft McPherson
Ft Providence
Ft Simpson
Hay River
Lutsel K'e
Rae-Edzo
Yellowknife
Ft Good Hope
Ft Liard
Ft Resolution
Ft. Smith
Inuvik
Norman Wells
Tuktoyaktuk

To obtain a copy of the NWT Species Monitoring infobase or to obtain more information about the General Status evaluation process, contact:

Wildlife and Fisheries Division
Department of Resources,
Wildlife and Economic Development
Government of the Northwest Territories
Box 1320
Yellowknife, NT
X1A 2L9

To obtain more information about the General Status evaluation process.

Visit
The Wildlife and Fisheries Web Page
www.nwtwildlife.rwed.gov.nt.ca